Drinking Water Surveillance Program

BURLINGTON WATER TREATMENT PLANT

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BURLINGTON
WATER TREATMENT PLANT

DRINKING WATER SURVEILLANCE PROGRAM

ANNUAL REPORT 1988

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EXECUTIVE SUMMARY

DRINKING WATER SURVEILLANCE PROGRAM

BURLINGTON WATER TREATMENT PLANT
1988 ANNUAL REPORT

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. Currently, 52 plants are being monitored.

The Burlington Water Treatment Plant is a direct filtration plant which treats water from Lake Ontario. The treatment process consists of coagulation, flocculation, filtration, disinfection and fluoridation. This plant has a design capacity of 227 x 1000 m^3/day and serves a population of approximately 120,000.

Water samples from the raw, treated and one distribution system site were taken on a monthly basis. The Burlington Water Treatment Plant was sampled for approximately 160 parameters, monthly in 1988. Parameters were divided into the following groups: Bacteriological, Inorganic and Physical (Laboratory Chemistry, Field Chemistry and Metals) and Organic (Chloroaromatics, Chlorophenols, Pesticides and PCB, Phenolics, Polynuclear Aromatic Hydrocarbons, Specific Pesticides and Volatiles). Chlorophenols and Specific Pesticides were analysed for in June and November only.

A summary of results is shown in Table 1.

Inorganic and Physical parameters were below any applicable health related ODWG's.

Of a total of approximately 110 Organic parameters tested for on a monthly basis, none exceeded health related guidelines.

During 1988 the DWSP sampling results indicated that the Burlington Water Treatment Plant produced good quality water at the plant and this quality was maintained in the distribution system.

TABLE 1

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS

SUMMARY TABLE BY SCAN

SCAN	RAW			TREATED			SITE 2		
	TESTS	POSITIVE	%POSITIVE	TESTS	POSITIVE	%POSITIVE	TESTS	POSITIVE	%POSITIVE
BACTERIOLOGICAL	44	39	88	44	7	15	44	13	29
CHEMISTRY (FLD)	39	39	100	70	70	100	108	108	100
CHEMISTRY (LAB)	227	187	82	244	176	72	431	345	80
METALS	286	158	55	287	147	51	541	301	55
CHLOROAROMATICS	168	0	0	168	0	0	168	0	0
CHLOROPHENOLS	12	0	0	12	0	0	.	.	.
PAH	204	0	0	204	0	0	.	.	.
PESTICIDES & PCB	394	0	0	394	0	0	394	0	0
PHENOLICS	12	3	25	12	3	25	.	.	.
SPECIFIC PESTICIDES	56	0	0	56	0	0	0	0	0
VOLATILES	258	0	0	258	36	13	258	36	13
TOTAL	1700	426		1749	439		1944	803	

NO HEALTH RELATED GUIDELINES WERE EXCEEDED

A POSITIVE VALUE DENOTES THAT THE RESULT IS GREATER THAN THE STATISTICAL LIMIT OF DETECTION AND IS QUANTIFIABLE
A '.' INDICATES THAT NO SAMPLE WAS TAKEN

DRINKING WATER SURVEILLANCE PROGRAM

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INTRODUCTION

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. Currently, 52 plants are being monitored.

The DWSP was initiated at the Burlington Water Treatment Plant in August of 1986. An Annual Report was published for 1987 (ISSN 0840-5247).

This report contains information and results for 1988.

PLANT DESCRIPTION

The Burlington Water Treatment Plant is a direct filtration plant which treats water from Lake Ontario. The process consists of coagulation, flocculation, filtration, disinfection and fluoridation. A polyelectrolyte is added as a coagulant aid. This plant has a design capacity of 227 x 1000 m^3/day and daily flows ranging from 51.0 x 1000 m^3/day to 168.2 x 1000 m^3/day. It serves a population of 120,000 people. The plant location is shown in Figure 1. Plant process details, in a block schematic, are shown in Figure 2. General plant information is presented in Table 2.

METHODS

Water samples were obtained from three DWSP approved locations;

i) Plant Raw - The water originated from the raw water low lift well prior to chlorination and was sampled through a stainless steel sample line. The sample tap is located near the lowlift well.

ii) Plant Treated - The water originated from the reservoir after addition of all treatment chemicals and was sampled through a stainless steel sample line. The sample tap is located in the lab.

iii) Distribution System - Site 2 - This house is approximately 5 kilometers from the plant. Water was sampled through a copper sample line at the basement tap.

Sample lines in the plant were flushed prior to sampling to ensure that the water obtained was indicative of its origin and not residual water standing in the sample line.

At the distribution system location two types of samples were obtained: a standing and a free flow. The standing sample consisted of water that had been in the household plumbing and service connection for a minimum of six hours. These samples are used to make an assessment of the amount by which the levels of inorganic compounds and metals may be changed on standing due to leaching from (or deposition on) the plumbing system. The only

FIGURE 1

DRINKING WATER SURVEILLANCE PROGRAM

SITE LOCATION MAP

BURLINGTON WATER TREATMENT PLANT

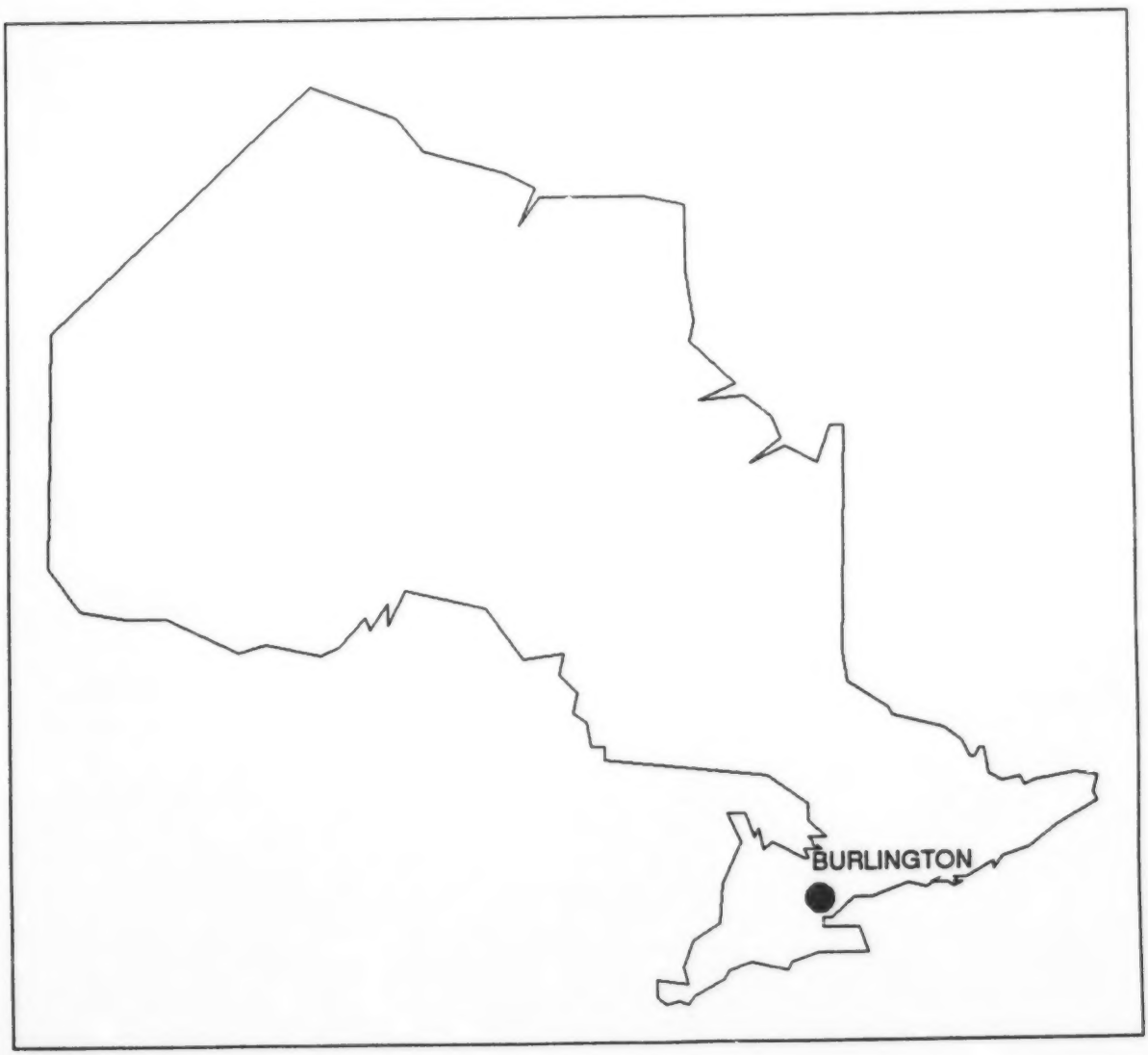

Figure 2

BURLINGTON WATER TREATMENT PLANT

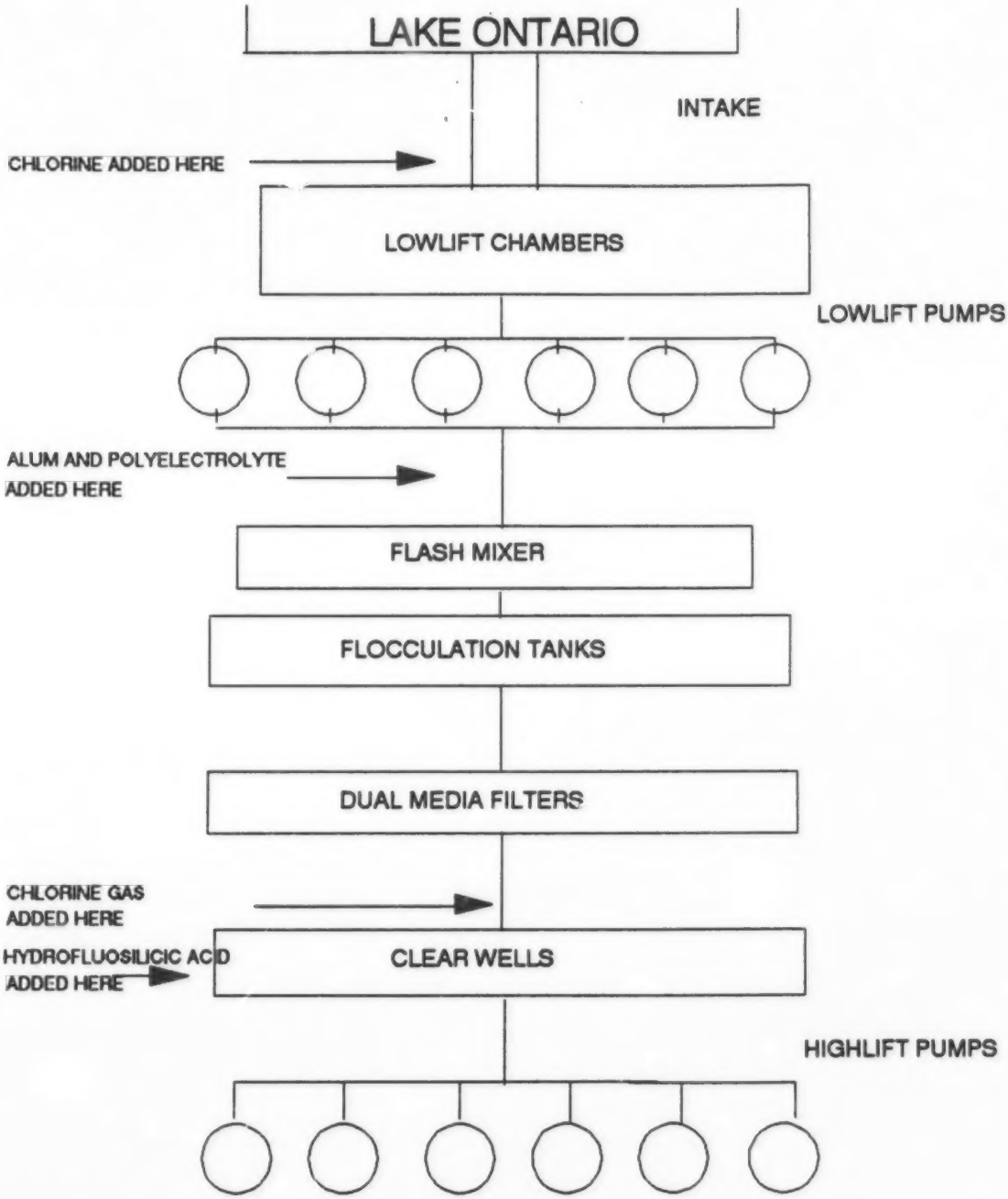

TABLE 2

DRINKING WATER SURVEILLANCE PROGRAM ANNUAL REPORT

GENERAL INFORMATION

BURLINGTON WATER SUPPLY SYSTEM

LOCATION:	3249 LAKESHORE ROAD EAST BURLINGTON, ONTARIO (416-827-2151)
SOURCE:	RAW WATER SOURCE - LAKE ONTARIO
RATED CAPACITY:	164 (1000 M^3/DAY)
OPERATION:	MUNICIPAL
PLANT SUPERINTENDENT:	D. CLANCY
MINISTRY REGION:	CENTRAL
DISTRICT OFFICER:	G.B. NELSON

MUNICIPALITY SERVED	POPULATION
BURLINGTON WATERDOWN	120,000

analyses carried out on the standing samples therefore, are General Chemistry and Metals. The free flow sample represented fresh water from the distribution main that had been flowing from the sample tap for five minutes before beingsampled.

Attempts were made to capture the same block of water at each sampling point by taking the retention time into consideration. The retention time was calculated by dividing the volume of water between the two sampling points by the sample day flow. For example, if it was determined that the retention time within the plant was five hours then there would be a five hour interval between the raw and treated sampling. Similarly, if it was estimated that it took approximately one day for the water to travel from the plant to the distribution system site, this site would be sampled one day after the treated water from the plant.

Stringent DWSP sampling protocols were followed to ensure that all samples were taken in a uniform manner.

Sample day flow, treatment chemical dosages and Field Chemistry measurements such as Turbidity, Chlorine Residuals, pH and Temperature were recorded on the day of sampling and were entered on the DWSP data base as submitted.

RESULTS

The Burlington Water Treatment Plant was sampled for approximately 160 parameters on a monthly basis.

The Specific Pesticides and Chlorophenols scans were sampled for in June and November only. Polynuclear Aromatic Hydrocarbons and Phenolics were only analysed for in the raw and treated water at the plant. As a result of an unforeseen emergency the laboratory capacity was exceeded and analysis for volatiles could not be carried out when the samples were received. Since analysis for volatiles is no longer valid after four weeks of storage, volatile results for January, February or March are not available.

Table 3 contains information on the sample day retention time, flow rate and treatment chemicals used and their associated dosages.

Table 4 is a summary break-down of the number of water samples analysed for by parameter and by water type. The number of times that a positive or trace result was detected is also reported.

Positive denotes that the result is greater than the statistical limit of detection established by the Ministry of the Environment (MOE) laboratory staff and is quantifiable. Trace (<T) denotes that the level measured is greater than the lowest value detectable by the method but lies so close to the detection limit that it cannot be confidently quantified.

Table 5 presents the results for parameters detected on at least one occasion.

Table 6 lists all parameters analysed in the DWSP.

Associated guidelines and detection limits are also supplied on Tables 5 and 6. Parameters are listed alphabetically within each scan.

DISCUSSION

General

Water quality is judged by comparison with the Ontario Drinking Water Objectives (ODWOs) as defined in the 1984 publication (ISBN 0-7743-3985-0). The Province of Ontario has health related and aesthetic objectives for 49 parameters, these are are currently under review. When an ODWO is not available guidelines/limits from other agencies are consulted. The Parameters Listing System (PALIS) recently published (ISBN 0-7729-4461-X) by the MOE catalogues and keeps current over 1750 guidelines for 650 parameters from agencies throughout the world.

Although some of the parameters measured on DWSP may be present in the raw and treated water as a result of pollution, many of the compounds detected are naturally occuring or are treatment by-products.

Plant operational personnel address occurrences of taste and odour or biological water quality parameters. The DWSP does not assess these aspects of the water supply.

As stated under Results, traces do not indicate quantifiable values, as defined by established MOE Laboratory analytical reporting protocols. The

occasional finding of a trace level of a contaminant is thus not considered to be significant. They can be useful in trend analysis, or confirmation of a specific contaminant that is repeatedly detected at these levels. **DISCUSSION OF GUIDELINES AND LIMITS THEREFORE, IS ONLY CONDUCTED ON POSITIVE RESULTS.**

Bacteriology

Positive results for the Bacteriology scan were present seven times in the treated water and thirteen times in the Site 2 water. The positive parameters were Standard Plate Count, Total Colform and/or Total Coliform Background.

Coliforms were detected in the October distribution system Site 2 sample at 2 counts/100 mL by the membrane filtration test.

Standard Plate Count is a test used to supplement routine analysis for Coliform bacteria. The limit for Standard Plate Count (at 35°C after 48 hours) in the ODWOs is 500 organisms per mL (based on a geometric mean of 5 or more samples). A High Standard Plate Count was present in the August distribution system Site 2 water. While no indicators of unsafe water were detected at this time, the high Standard Plate Count may be indicative of a deterioration in conditions in the distribution system. A total Chlorine Residual of at least 0.10 mg/L was detected in the distribution system Site 2 sample. No other samples contained bacteriological results over any applicable ODWOs.

Guidelines for bacteriological sampling and testing of a supply are developed to maintain a proper supervision of its bacteriological quality; the routine monitoring program usually requires the taking of multiple samples in a given system. Full interpretation of bacteriological quality cannot be made on the basis of single samples. Further, bacteriological limits were developed in acknowledgement that the presence of coliforms may be detected due to their non-uniform distribution throughout the distribution system and the fact that their enumeration is subject to considerable variation. For these reasons, the occasional finding of low numbers of coliform organisms is not unexpected. Routine bacteriological monitoring, as outlined in the ODWOs is carried out by the operating authority.

Inorganic and Physical Parameters

Laboratory and Field Chemistry

The results for Laboratory and Field Chemistry scans were below any applicable health related ODWOs.

It is desirable that the Temperature of drinking water be less than 15°C; the palatability of water is enhanced by its coolness. A temperature below 15°C will tend to reduce the growth of nuisance organisms and hence minimize associated taste, colour, odour and corrosion problems. The temperature of the delivered water may increase in the distribution system due to the warming effect of the soil in late summer and fall and/or as a result of higher temperatures in the source water. The desired ODWO was exceeded once in the treated water.

The Langelier Index is used extensively in estimating the corrosion potential of water. An increasingly negative index indicates the increasing possibility of corrosion. It is considered sound engineering practice to maintain a slightly positive Langelier Index. The Langelier Index for Burlington is consistently in the positive range.

As part of the treatment plant process hydrofluosilicic acid is added to the treated water (Table 3). Where fluoridation is practised, the fluoride concentration recommended in the ODWO is 1.2 mg/L, plus or minus 0.2 mg/L. Results indicate that the plant was frequently underdosing and the recommended level was only achieved in four distribution system samples. The fluoridation system was down for repairs in May.

Metals

The results reported for the Metal scan were below any applicable ODWOs.

Levels of Copper, Manganese, Nickel, Lead and Zinc were slighly higher in the standing samples as compared to the free flow distribution samples, indicating that these metals were leached from the household plumbing as the water stood overnight. Although the Langelier Index indicates minimal potential for corrosion some metals will be leached in standing samples in most supplies.

Mercury levels in the raw and treated water samples were much higher in the June, July and August samples as compared to other months however the ODWO

of 1.0 ug/L was not exceeded. The distribution system sample results were consistently low. Over the past two years in the DWSP it has been observed that potassium dichromate, a preservative for mercury samples, has a limited shelf-life and may show false positives for the presence of Mercury. As the preservative deteriorates Mercury levels may increase as a result of interferences, the preservative was replaced in September. As a result, many of the elevated values of mercury provided in the data tables are greater than the level actually present.

At present, there is no evidence that Aluminum is physiologically harmful and no health limit for drinking water has been specified. The measure of residual Aluminum in the treated water is important to indicate the efficiency of the treatment process. The ODWOs indicate that a useful guideline is to maintain a residual below 100 ug/L as Al in the water leaving the plant to avoid problems in the distribution system. Aluminum values exceeded the ODWO operational guideline twelve times in the treated water and distributed water.

Organic Parameters

Chloroaromatics

The results of the Chloroaromatics scan showed that no chloroaromatics were detected.

Chlorophenols

The results of the Chlorophenol scan showed that no Chlorophenols were

detected.

Pesticides and PCB

Results of the Pesticides and PCB scan showed that no PCBs were detected and that three pesticides were detected:

Alpha BHC

Lindane

Atrazine

There are several isomers of BHC (benzene hexachloride); gamma Lindane is the active ingredient of the pesticide Lindane, while alpha BHC is the isomer most predominantly found in surface waters in the Great Lakes basin.

Alpha BHC was detected at trace levels in, nine of the raw water samples, nine of the treated water samples and ten of the Site 2 water samples.

Lindane was detected at trace levels, four times in the raw water, four times in the treated water and twice in the Site 2 water.

Atrazine was detected at a trace level once in the April Site 2 water.

Specific Pesticides

The results of the Specific Pesticide scan showed that none were detected.

Phenolics

The maximum desirable concentration of phenolic substances in drinking water

is 2.0 ug/L. This limit has been set primarily to prevent the occurrence of undesirable tastes and odours, particularly in chlorinated water. Phenolics were detected at 1.6 ug/L in the June raw water sample and 1.0 ug/L in August, 0.8 ug/L in the August treated water and 1.2 ug/L in October. the values for the May raw and treated water samples were considered unreliable by laboratory staff as per the remark 'UCR'. Phenolics were detected at trace levels, five times in the raw water and four times in the treated water. Phenolic compounds are present in the aquatic environment as a result of natural and/or industrial processes.

Polynuclear Aromatic Hydrocarbons (PAH)

The results of the PAH scan showed that no PAHs were detected.

Volatiles

The results of the Volatile scan showed that seven parameters, other than Trihalomethanes(THMs) were detected:

Toluene

Ethylbenzene

Para & Meta-Xylene

Ortho-Xylene

Styrene

1,1,1-Trichloroethane

Tetrachloroethylene

Toluene was detected at trace levels, four times in the treated water and four times in the distribution system Site 2 water. The detection of toluene

at low, trace levels is a laboratory artifact derived from the analytical methodology. The purge-and-trap analytical technique depends on the purging of the volatile organics in the water sample with helium gas onto a Tenax trapping column. The volatile materials are subsequently thermally desorbed, separated and quantified. Tenax, a toluene-like polymeric material, tends to decompose sporadically upon heating into toluene and other aromatic componenets (ethylbenzene and xylene) giving instrument blanks in the order of 0.05 ug/L.

The detected trace levels of Styrene are also considered to be laboratory artifacts due to the outgassing of monomeric styrene from the polystyrene shipping containers. The sporadic background levels from this source are in the order of 0.05 ug/L.

Ethylbenzene was detected at trace levels, seven times in the treated water and seven times in the Site 2 water.

Para and Meta-Xylene are measured as one compound, M-Xylene, and were detected at a trace level, once in the treated water.

Ortho-Xylene (O-Xylene) was detected at trace levels, once in the treated water and twice in the Site 2 water.

These volatiles are typically found on an occasional basis at other water supplies included on the DWSP, usually at trace levels.

1,1,1-Trichloroethane was detected at trace levels, once in the raw water, once in the treated water and twice in the Site 2 water.

Tetrachloroethylene was detected at trace levels, once in the treated water and once in the Site 2 water.

THMs are known to be produced during the water treatment process and will always occur in chlorinated surface waters. THMs are comprised of Chloroform, Chlorodibromomethane and Dichlorobromomethane. Bromoform occurs occasionally. Results are reported for the individual compounds as well as for total THMs.

Chloroform, Chlorodibromomethane, Dichlorobromomethane and Total THMs were detected in all treated waters. Bromoform was detected at trace levels in all treated water samples. Traces of Chloroform and/or Chlorodibromomethane and Dichlorobromomethane and Total THMs were detected in the August, September and November raw water samples. All Total THM occurrences, ranging from 30.1 ug/L to 46.25 ug/L were well below the ODWO of 350 uG/L.

CONCLUSIONS

The Burlington Water Treatment Plant for the sample year of 1988 produced good quality water at the plant and this was maintained in the distribution system.

No health related guidelines, for organic or inorganic parameters, were

exceeded during 1987 or 1988.

RECOMMENDATIONS

Two recommendations can be made:

1) The fluoride dosage should be adjusted so that recommended levels of fluoride are achieved in distributed water.

2) The alum dosage should be adjusted and the treatment process optimized so that the recommended levels of aluminum are not exceeded.

TABLE 3

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS SAMPLE DAY CONDITIONS FOR 1988

	SAMPLE DAY CONDITIONS		TREATMENT CHEMICAL DOSAGES (MG/L)				
			PRE-CHLORINATION	COAGULATION	COAGULATION AID	FLUORIDATION	POST-CHLORINATION
DATE	RETENTION TIME(HRS)	FLOW (1000 M3)	CHLORINE	ALUM LIQUID	POLYELECTROLYTE	HYDROFLUOSILICIC ACID	CHLORINE
JAN 05	1.6	51.0	.84	2.06	.26	.98	.41
FEB 02	1.5	55.0	1.24	1.63	.23	.97	.51
MAR 08	1.8	45.7	.89	3.50	.26	.90	.36
APR 06	1.3	65.4	1.12	3.25	.	1.02	.28
MAY 03	1.1	76.0	.86	3.14		.	.31
JUN 07	.5	162.2	.95	4.11	.	1.01	.45
JUL 05	.5	168.2	1.00	5.06	.	.96	.43
AUG 08	.8	95.0	1.08	4.85	.	.97	.39
SEP 07	2.0	64.5	2.08	4.21	.	.83	.52
OCT 04	1.3	61.1	1.08	5.86	.	.75	.38
NOV 08	1.2	54.3	1.18	5.67	.	.74	.40
DEC 06	1.1	57.7	.82	5.07	.	1.12	.29

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	RAW			TREATED			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
BACTERIOLOGICAL	FECAL COLIFORM MF	12	7	0	.	.	.	.	.	.
	STANDRD PLATE CNT MF	8	8	0	12	7	0	12	11	0
	P/A BOTTLE	.	.	.	8	0	0	8	0	0
	TOTAL COLIFORM MF	12	12	0	12	0	0	12	1	0
	T COLIFORM BCKGRD MF	12	12	0	12	0	0	12	1	0
*TOTAL SCAN BACTERIOLOGICAL		44	39	0	44	7	0	44	13	0
*TOTAL GROUP BACTERIOLOGICAL		44	39	0	44	7	0	44	13	0
CHEMISTRY (FLD)	FLD CHLORINE (COMB)	1	1	0	11	11	0	12	12	0
	FLD CHLORINE FREE	1	1	0	12	12	0	19	19	0
	FLD CHLORINE (TOTAL)	1	1	0	12	12	0	17	17	0
	FLD PH	12	12	0	12	12	0	23	23	0
	FLD TEMPERATURE	12	12	0	12	12	0	22	22	0
	FLD TURBIDITY	12	12	0	11	11	0	15	15	0
*TOTAL SCAN CHEMISTRY (FLD)		39	39	0	70	70	0	108	108	0
CHEMISTRY (LAB)	ALKALINITY	11	11	0	12	12	0	24	24	0
	CALCIUM	11	11	0	12	12	0	24	24	0
	CYANIDE	12	0	0	11	0	0	12	0	1
	CHLORIDE	11	11	0	12	12	0	24	24	0
	COLOUR	11	3	8	12	0	11	24	1	23

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	RAW			TREATED			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
CHEMISTRY (LAB)	CONDUCTIVITY	11	11	0	12	12	0	24	24	0
	FLUORIDE	11	11	0	12	12	0	24	24	0
	HARDNESS	11	11	0	12	12	0	24	24	0
	IONCAL	12	4	0	12	5	0	24	24	0
	LANGELIERS INDEX	11	11	0	12	12	0	24	10	0
	MAGNESIUM	11	11	0	12	12	0	24	24	0
	SODIUM	11	11	0	12	12	0	24	24	0
	AMMONIUM TOTAL	11	7	3	12	5	7	24	24	0
	NITRITE	11	9	2	12	0	9	24	11	13
	TOTAL NITRATES	11	11	0	12	12	0	24	2	20
	NITROGEN TOT KJELD	11	11	0	12	12	0	24	24	0
	PH	11	11	0	12	12	0	24	24	0
	PHOSPHORUS FIL REACT	11	8	3	11	5	5	.	.	.
	PHOSPHORUS TOTAL	11	8	2	12	0	7	.	.	.
	TOTAL SOLIDS	1	1	0	1	1	0	2	2	0
	SULPHATE	4	4	0	5	5	0	10	10	0
	TURBIDITY	11	11	0	12	11	1	23	21	2
*TOTAL SCAN CHEMISTRY (LAB)		227	187	18	244	176	40	431	345	59
METALS	SILVER	12	0	8	12	0	7	23	0	10
	ALUMINUM	12	12	0	12	12	0	23	23	0
	ARSENIC	12	7	5	12	5	7	23	6	15
	BARIUM	12	12	0	12	12	0	23	23	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	RAW			TREATED			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
METALS	BORON	11	11	0	11	11	0	22	22	0
	BERYLLIUM	12	0	5	12	0	5	23	0	9
	CADMIUM	12	0	8	12	0	8	23	0	8
	COBALT	12	0	11	12	0	11	23	2	20
	CHROMIUM	12	5	7	12	4	8	23	9	14
	COPPER	12	12	0	12	9	3	23	23	0
	IRON	12	1	11	12	0	7	23	0	18
	MERCURY	12	11	0	12	11	0	12	5	4
	MANGANESE	12	12	0	12	8	4	23	19	2
	MOLYBDENUM	12	12	0	12	12	0	23	23	0
	NICKEL	12	3	7	12	4	7	23	11	7
	LEAD	12	1	11	12	1	7	23	20	2
	ANTIMONY	12	12	0	12	12	0	23	22	1
	SELENIUM	12	0	11	12	0	12	23	0	22
	STRONTIUM	12	12	0	12	12	0	23	23	0
	TITANIUM	12	11	1	12	10	2	23	20	3
	THALLIUM	12	0	4	12	0	2	23	0	6
	URANIUM	11	11	0	12	12	0	24	24	0
	VANADIUM	12	1	11	12	3	9	23	4	19
	ZINC	12	12	0	12	9	3	23	22	1
*TOTAL SCAN METALS		286	158	100	287	147	102	541	301	161
*TOTAL GROUP INORGANIC & PHYSICAL		552	384	118	601	393	142	1080	754	220
CHLOROAROMATICS	HEXACHLOROBUTADIENE	12	0	0	12	0	0	12	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	RAW			TREATED			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
CHLOROAROMATICS	123 TRICHLOROBENZENE	12	0	0	12	0	0	12	0	0
	1234 T-CHLOROBENZENE	12	0	0	12	0	0	12	0	0
	1235 T-CHLOROBENZENE	12	0	0	12	0	0	12	0	0
	124 TRICHLOROBENZENE	12	0	0	12	0	0	12	0	0
	1245 T-CHLOROBENZENE	12	0	0	12	0	0	12	0	0
	135 TRICHLOROBENZENE	12	0	0	12	0	0	12	0	0
	HCB	12	0	0	12	0	0	12	0	0
	HEXACHLOROETHANE	12	0	0	12	0	0	12	0	0
	OCTACHLOROSTYRENE	12	0	0	12	0	0	12	0	0
	PENTACHLOROBENZENE	12	0	0	12	0	0	12	0	0
	236 TRICHLOROTOLUENE	12	0	0	12	0	0	12	0	0
	245 TRICHLOROTOLUENE	12	0	0	12	0	0	12	0	0
	26A TRICHLOROTOLUENE	12	0	0	12	0	0	12	0	0
*TOTAL SCAN CHLOROAROMATICS		168	0	0	168	0	0	168	0	0
CHLOROPHENOLS	234 TRICHLOROPHENOL	2	0	0	2	0	0	.	.	.
	2345 T-CHLOROPHENOL	2	0	0	2	0	0	.	.	.
	2356 T-CHLOROPHENOL	2	0	0	2	0	0	.	.	.
	245-TRICHLOROPHENOL	2	0	0	2	0	0	.	.	.
	246-TRICHLOROPHENOL	2	0	0	2	0	0	.	.	.
	PENTACHLOROPHENOL	2	0	0	2	0	0	.	.	.
*TOTAL SCAN CHLOROPHENOLS		12	0	0	12	0	0	0	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	RAW			TREATED			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
PAH	PHENANTHRENE	12	0	0	12	0	0	.	.	.
	ANTHRACENE	12	0	0	12	0	0	.	.	.
	FLUORANTHENE	12	0	0	12	0	0	.	.	.
	PYRENE	12	0	0	12	0	0	.	.	.
	BENZO(A)ANTHRACENE	12	0	0	12	0	0	.	.	.
	CHRYSENE	12	0	0	12	0	0	.	.	.
	DIMETH. BENZ(A)ANTHR	12	0	0	12	0	0	.	.	.
	BENZO(E) PYRENE	12	0	0	12	0	0	.	.	.
	BENZO(J) FLUORANTHEN	0	0	0	0	0	0	.	.	.
	BENZO(B) FLUORANTHEN	12	0	0	12	0	0	.	.	.
	PERYLENE	12	0	0	12	0	0	.	.	.
	BENZO(K) FLUORANTHEN	12	0	0	12	0	0	.	.	.
	BENZO(A) PYRENE	12	0	0	12	0	0	.	.	.
	BENZO(G,H,I) PERYLEN	12	0	0	12	0	0	.	.	.
	DIBENZO(A,H) ANTHRAC	12	0	0	12	0	0	.	.	.
	INDENO(1,2,3-C,D) PY	12	0	0	12	0	0	.	.	.
	BENZO(B) CHRYSENE	12	0	0	12	0	0	.	.	.
	ANTHANTHRENE	0	0	0	0	0	0	.	.	.
	CORONENE	12	0	0	12	0	0	.	.	.
*TOTAL SCAN PAH		204	0	0	204	0	0	0	0	0
PESTICIDES & PCB	ALDRIN	12	0	0	12	0	0	12	0	0
	ALPHA BHC	12	0	9	12	0	9	12	0	10

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	RAW			TREATED			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
PESTICIDES & PCB	BETA BHC	12	0	0	12	0	0	12	0	0
	LINDANE	12	0	4	12	0	4	12	0	2
	ALPHA CHLORDANE	12	0	0	12	0	0	12	0	0
	GAMMA CHLORDANE	12	0	0	12	0	0	12	0	0
	DIELDRIN	12	0	0	12	0	0	12	0	0
	METHOXYCHLOR	12	0	0	12	0	0	12	0	0
	ENDOSULFAN I	12	0	0	12	0	0	12	0	0
	ENDOSULFAN II	12	0	0	12	0	0	12	0	0
	ENDRIN	12	0	0	12	0	0	12	0	0
	ENDOSULFAN SULPHATE	12	0	0	12	0	0	12	0	0
	HEPTACHLOR EPOXIDE	12	0	0	12	0	0	12	0	0
	HEPTACHLOR	12	0	0	12	0	0	12	0	0
	MIREX	12	0	0	12	0	0	12	0	0
	OXYCHLORDANE	12	0	0	12	0	0	12	0	0
	OPDDT	12	0	0	12	0	0	12	0	0
	PCB	12	0	0	12	0	0	12	0	0
	DDD	12	0	0	12	0	0	12	0	0
	PPDDE	12	0	0	12	0	0	12	0	0
	PPDDT	12	0	0	12	0	0	12	0	0
	AMETRINE	12	0	0	12	0	0	12	0	0
	ATRAZINE	12	0	0	12	0	0	12	0	1
	ATRATONE	12	0	0	12	0	0	12	0	0
	CYANAZINE	12	0	0	12	0	0	12	0	0
	DES ETHYL ATRAZINE	5	0	0	5	0	0	5	0	0
	DES ETHYL SIMAZINE	5	0	0	5	0	0	5	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	RAW			TREATED			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
PESTICIDES & PCB	PROMETONE	12	0	0	12	0	0	12	0	0
	PROPAZINE	12	0	0	12	0	0	12	0	0
	PROMETRYNE	12	0	0	12	0	0	12	0	0
	METRIBUZIN	12	0	0	12	0	0	12	0	0
	SIMAZINE	12	0	0	12	0	0	12	0	0
	ALACHLOR	12	0	0	12	0	0	12	0	0
	METOLACHLOR	12	0	0	12	0	0	12	0	0
*TOTAL SCAN PESTICIDES & PCB		394	0	13	394	0	13	394	0	13
PHENOLICS	PHENOLICS	12	3	5	12	3	4	.	.	.
*TOTAL SCAN PHENOLICS		12	3	5	12	3	4	0	0	0
SPECIFIC PESTICIDES	TOXAPHENE	0	0	0	0	0	0	0	0	0
	2,4,5-T	2	0	0	2	0	0	.	.	.
	2,4-D	2	0	0	2	0	0	.	.	.
	24DCHLRPHENOXYBUTYRC	2	0	0	2	0	0	.	.	.
	2,4 D PROPIONIC ACID	2	0	0	2	0	0	.	.	.
	DICAMBA	2	0	0	2	0	0	.	.	.
	PICHLORAM	0	0	0	0	0	0	.	.	.
	SILVEX	2	0	0	2	0	0	.	.	.
	DIAZINON	2	0	0	2	0	0	.	.	.

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	RAW			TREATED			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
SPECIFIC PESTICIDES	DICHLOROVOS	2	0	0	2	0	0	.	.	.
	CHLORPYRIFOS	2	0	0	2	0	0	.	.	.
	ETHION	2	0	0	2	0	0	.	.	.
	AZINPHOS-METHYL	0	0	0	0	0	0	.	.	.
	MALATHION	2	0	0	2	0	0	.	.	.
	MEVINPHOS	2	0	0	2	0	0	.	.	.
	METHYL PARATHION	2	0	0	2	0	0	.	.	.
	METHYLTRITHION	2	0	0	2	0	0	.	.	.
	PARATHION	2	0	0	2	0	0	.	.	.
	PHORATE	2	0	0	2	0	0	.	.	.
	RELDAN	2	0	0	2	0	0	.	.	.
	RONNEL	2	0	0	2	0	0	.	.	.
	AMINOCARB	0	0	0	0	0	0	.	.	.
	BENOMYL	2	0	0	2	0	0	.	.	.
	BUX	2	0	0	2	0	0	.	.	.
	CARBOFURAN	2	0	0	2	0	0	.	.	.
	CICP	2	0	0	2	0	0	.	.	.
	DIALLATE	2	0	0	2	0	0	.	.	.
	EPTAM	2	0	0	2	0	0	.	.	.
	IPC	2	0	0	2	0	0	.	.	.
	PROPOXUR	2	0	0	2	0	0	.	.	.
	CARBARYL	2	0	0	2	0	0	.	.	.
	BUTYLATE	2	0	0	2	0	0	.	.	.
*TOTAL SCAN SPECIFIC PESTICIDES		56	0	0	56	0	0	0	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	RAW			TREATED			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
VOLATILES	BENZENE	9	0	0	9	0	0	9	0	0
	TOLUENE	9	0	0	9	0	4	9	0	4
	ETHYLBENZENE	9	0	0	9	0	7	9	0	7
	P-XYLENE	9	0	0	9	0	0	9	0	0
	M-XYLENE	9	0	0	9	0	1	9	0	0
	O-XYLENE	9	0	0	9	0	1	9	0	2
	STYRENE	3	0	1	3	0	3	3	0	3
	1,1 DICHLOROETHYLENE	9	0	0	9	0	0	9	0	0
	METHYLENE CHLORIDE	9	0	0	9	0	0	9	0	0
	T1,2DICHLOROETHYLENE	9	0	0	9	0	0	9	0	0
	1,1 DICHLOROETHANE	9	0	0	9	0	0	9	0	0
	CHLOROFORM	9	0	3	9	9	0	9	9	0
	111, TRICHLOROETHANE	9	0	1	9	0	1	9	0	2
	1,2 DICHLOROETHANE	9	0	0	9	0	0	9	0	0
	CARBON TETRACHLORIDE	9	0	0	9	0	0	9	0	0
	1,2 DICHLOROPROPANE	9	0	0	9	0	0	9	0	0
	TRICHLOROETHYLENE	9	0	0	9	0	0	9	0	0
	DICHLOROBROMOMETHANE	9	0	2	9	9	0	9	9	0
	112 TRICHLOROETHANE	9	0	0	9	0	0	9	0	0
	CHLORODIBROMOMETHANE	9	0	1	9	9	0	9	9	0
	T-CHLOROETHYLENE	9	0	0	9	0	1	9	0	1
	BROMOFORM	9	0	0	9	0	9	9	0	9
	1122 T-CHLOROETHANE	9	0	0	9	0	0	9	0	0
	CHLOROBENZENE	9	0	0	9	0	0	9	0	0
	1,4 DICHLOROBENZENE	9	0	0	9	0	0	9	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	RAW			TREATED			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
VOLATILES	1,3 DICHLOROBENZENE	9	0	0	9	0	0	9	0	0
	1,2 DICHLOROBENZENE	9	0	0	9	0	0	9	0	0
	TRIFLUOROCHLOROTOLUE	3	0	0	3	0	0	3	0	0
	ETHLYENE DIBROMIDE	9	0	0	9	0	0	9	0	0
	TOTL TRIHALOMETHANES	9	0	1	9	9	0	9	9	0
*TOTAL SCAN VOLATILES		258	0	9	258	36	27	258	36	28
*TOTAL GROUP ORGANIC		1104	3	27	1104	39	44	820	36	41
TOTAL		1700	426	145	1749	439	186	1944	803	261

KEY TO TABLE 5 and 6

A ONTARIO DRINKING WATER OBJECTIVES (ODWO)
1. Maximum Acceptable Concentration (MAC)
1+. MAC for Total Trihalomethanes
1*. MAC for Bacteriological Analyses
Poor water quality is indicated when :
- total coliform counts > 0 < 5
- P/A Bottle Test is present after 48 hours
- Aeromonas organisms are detected in more than 25% of samples in a single submission or in successive submissions from the same sampling site
- Pseudomonas Aeruginosa, Staphylococcus Aureus and members of the Fecal Streptococcus group should not be detected in any sample
- Standard Plate Count should not exceed 500 organisms per ml at 35 ^{0}C within 48 hours

2. Interim Maximum Acceptable Concentration (IMAC)
3. Maximum Desirable Concentration (MDC)
4. Aesthetic or Recommended Operational Guideline
- hardness levels between 80 and 100 mg/L as calcium carbonate are considered to provide an acceptable balance between corrosion and incrustation, water supplies with a hardness >200 mg/L are considered poor and those in excess of 500 mg/L are unacceptable.

B HEALTH & WELFARE CANADA (H&W)
1. Maximum Acceptable Concentration (MAC)
2. Proposed MAC
3. Interim MAC
4. Aesthetic Objective (AO) (for xylenes, the AO is a total)

C WORLD HEALTH ORGANIZATION (WHO)
1. Guideline Value (GV)
2. Tentative GV
3. Aesthetic GV

D US ENVIRONMENTAL PROTECTION AGENCY (EPA)
1. Maximum Contaminant Level (MCL)
2. Suggested No-Adverse Effect Level (SNAEL)
3. Lifetime Health Advisory
4. EPA Ambient Water Quality Criteria

F EUROPEAN ECONOMIC COMMUNITY (EEC)
1. Health Related Guideline Level
2. Aesthetic Guideline Level
3. Maximum Admissable Concentration (MADC)

G CALIFORNIA STATE DEPARTMENT OF HEALTH-GUIDELINE VALUE

H USSR MAXIMUM PERMISSIBLE CONCENTRATION

I NEW YORK STATE AMBIENT WATER GUIDELINE

N/A NONE AVAILABLE

INTERPRETATION OF DATA

The interpretation of analytical results that are obtained from measurements near the limit of detection of the measurement process is subject to greater uncertainty than those at higher concentrations. The principle areas of concern relate to whether the substance has actually been detected, whether it has been properly identified, and whether it is an artifact of the measurement process. In other words, false positives can be caused by the instrumentation or the test procedures used, when in fact these compounds are not present in the sample.

There are several methods to treat data from such measurements:
1. Exclude the low-level data because of this uncertainty factor. However, studies of long-term environmental trends and modelling may be adversely affected by exclusion of such data.
2. Qualify these data so the user is aware of the greater uncertainty associated with their use.

For the Drinking Water Surveillance Program, measurements near the limit of detection of the measurement process are reported qualified by the code "<T". Results quantified by "W" indicate a zero measurement. These results are reported for purposes of modelling and long-term trend analysis and no significance should be attributed to a single determination of a substance below "T" (a single determination may well be a false positive). Repeat analysis or additional data are needed before it can be stated with certainty that the substance in question was truly present. On the other hand, it is less likely that repeated detection of a substance at or near the limit of detection at a specific location is solely due to an artifact in the measurement system, and more likely represents a true positive. However the average of such data is still only an estimate of the amount of substance present subject to the possible biases of the method used.

LABORATORY RESULTS, REMARK DESCRIPTIONS

.	No Sample Taken
BDL	Below Minimum Measurable Amount
<T	Greater Than Detection Limit But Not Confident (SEE INTERPRETATION OF RESULTS ABOVE)
>	Results Are Greater Than The Upper Limit
<=>	Approximate Result
!AW	No Data: Analysis Withdrawn
!CR	No Data: Could Not Confirm By Reanalysis
!CS	No Data: Contamination Suspected
!IL	No Data: Sample Incorrectly Labelled
!IS	No Data: Insufficient Sample
!LA	No Data: Laboratory Accident

!LD	No Data: Test Queued After Sample Discarded
!NA	No Data: No Authorization To Perform Reanalysis
!NP	No Data: No Procedure
!NR	No Data: Sample Not Received
!OP	No Data: Obscured Plate
!QU	No Data: Quality Control Unacceptable
!PE	No Data: Procedural Error - Sample Discarded
!PH	No Data: Sample pH Outside Valid Range
!RE	No Data: Received Empty
!RO	No Data: See Attached Report (no numeric results)
!SM	No Data: Sample Missing
!SS	No Data: Send Separate Sample Properly Preserved
!UI	No Data: Indeterminant Interference
!TX	No Data: Time Expired
A3C	Approximate, Total Count Exceeded 300 Colonies
APL	Additional Peak, Large, Not Priority Pollutant
APS	Additional Peak, Less Than, Not Priority Pollutant
CIC	Possible Contamination, Improper Cap
CRO	Calculated Result Only
PPS	Test Performed On Preserved Sample
RMP	P and M-Xylene Not Separated
RRV	Rerun Verification
RVU	Reported Value Unusual
SPS	Several Peaks, Small, Not Priority Pollutant
UAL	Unreliable: Sample Age Exceeds Normal Limit
UCR	Unreliable: Could Not Confirm By Reanalysis
UCS	Unreliable: Contamination Suspected
UIN	Unreliable: Indeterminant Interference
XP	Positive After X Number of Hours
T# (T06)	Result Taken After # Hours

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
BACTERIOLOGICAL				
FECAL COLIFORM MF (CT/100ML)		DET'N LIMIT = 0		GUIDELINE = 0 (A1)
JAN	5	.	.	.
FEB	0	.	.	.
MAR	12	.	.	.
APR	0	.	.	.
MAY	0	.	.	.
JUN	0	.	.	.
JUL	0	.	.	.
AUG	2	.	.	.
SEP	3	.	.	.
OCT	2 T48	.	.	.
NOV	8 T24	.	.	.
DEC	12	.	.	.
STANDRD PLATE CNT MF (CT/ML)		DET'N LIMIT = 0		GUIDELINE = 500/ML (A1)
JAN	180	2	.	1
FEB	140	0	.	1
MAR	108	1	.	1
APR	1200	3	.	6
MAY	420	5	.	2
JUN	340	3	.	2
JUL	800	0	.	3
AUG	3	11	.	2400 >
SEP	.	4	.	4
OCT	.	1 <=>	.	21 T24
NOV	.	0 <=>	.	12 T06
DEC	.	0 <=>	.	1 <=>
P/A BOTTLE (0=ABSENT)		DET'N LIMIT = 0		GUIDELINE = 0 (A1*)
JAN	.	0	.	0
FEB	.	0	.	0
MAR	.	0	.	0
APR	.	0	.	0
MAY	.	0	.	0
JUN	.	0	.	0
JUL	.	0	.	0
AUG	.	0	.	0
TOTAL COLIFORM MF (CT/100ML)		DET'N LIMIT = 0		GUIDELINE = 5/100ML(A1)
JAN	116 A3C	0	.	0
FEB	30	0	.	0

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
MAR	216 A3C	0	.	0
APR	31 A3C	0	.	0
MAY	22	0	.	0
JUN	8 A3C	0	.	0
JUL	24	0	.	0
AUG	18 A3C	0	.	0
SEP	5800 A3C	0	.	0
OCT	176 A3C	0 T48	.	2 T24
NOV	132 A3C	0 T24	.	0 T06
DEC	72 A3C	0	.	0 T48
T COLIFORM BCKGRD MF (CT/100ML)		DET'N LIMIT = 0		GUIDELINE = N/A
JAN	760	0	.	0
FEB	300	0	.	0
MAR	1300	0	.	0
APR	1400	0	.	0
MAY	540	0	.	0
JUN	640	0	.	0
JUL	520	0	.	0
AUG	3200	0	.	19
SEP	75000	0	.	0
OCT	6000 A3C	0 T48	.	0 T24
NOV	470 A3C	0 T24	.	0 T06
DEC	9600 >	0	.	0 T48

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
CHEMISTRY (FLD)				
FLD CHLORINE (COMB) (MG/L)		DET'N LIMIT = N/A		GUIDELINE = N/A
JAN	.	.200	.100	.500
FEB	.	.100	.100	.200
MAR	.	.200	.	.200
APR	.	.200	.	.200
MAY	.	.200	.	.200
JUN	.	.200	.	.200
JUL	.	.	.	.200
AUG	.	.050	.010	.050
SEP	.	.090	.	.180
OCT	.160	.040	.	.
NOV	.	.070	.	.
DEC	.	.300	.	.
FLD CHLORINE FREE (MG/L)		DET'N LIMIT = N/A		GUIDELINE = N/A
JAN	.	.550	.100	.300
FEB	.	.900	.100	.500
MAR	.	.600	.100	.300
APR	.	.500	.100	.300
MAY	.	.600	.100	.300
JUN	.	.700	.100	.300
JUL	.	.700	.100	.400
AUG	.	.500	.010	.050
SEP	.	.500	.	.090
OCT	.300	.680	.100	.100
NOV	.	.620	.	.
DEC	.	.400	.	.
FLD CHLORINE (TOTAL) (MG/L)		DET'N LIMIT = N/A		GUIDELINE = N/A
JAN	.	.750	.	.
FEB	.	1.000	.200	.700
MAR	.	.800	.100	.500
APR	.	.700	.100	.500
MAY	.	.800	.100	.500
JUN	.	.900	.100	.500
JUL	.	.700	.100	.600
AUG	.	.550	.020	.100
SEP	.	.590	.	.270
OCT	.460	.720	.100	.100
NOV	.	.690	.	.
DEC	.	.700	.	.

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	FREE FLOW
FLD PH (DIMENSLESS)			DET'N LIMIT = N/A	GUIDELINE = 6.5-8.5(A4)
JAN	7.900	7.600	7.600	7.600
FEB	7.900	7.500	7.600	7.400
MAR	7.900	7.600	7.400	7.600
APR	7.900	7.500	7.400	7.200
MAY	8.000	7.800	7.600	7.600
JUN	7.900	7.500	7.600	7.600
JUL	8.200	7.450	7.400	7.400
AUG	7.800	7.500	7.600	7.000
SEP	8.100	7.150	.	7.300
OCT	8.000	7.100	7.400	7.400
NOV	8.100	7.300	7.400	7.400
DEC	7.800	7.500	7.500	7.500
FLD TEMPERATURE (DEG.C)			DET'N LIMIT = N/A	GUIDELINE = 15 (A1)
JAN	3.500	5.000	16.000	8.000
FEB	5.500	7.000	22.000	6.000
MAR	4.000	5.500	25.000	8.000
APR	7.000	8.000	22.000	6.000
MAY	8.000	8.500	25.000	8.000
JUN	10.000	11.500	23.000	11.000
JUL	15.000	12.500	22.000	14.000
AUG	13.000	14.000	20.000	14.000
SEP	17.000	17.500	.	.
OCT	12.500	13.500	21.000	15.000
NOV	6.000	9.000	16.000	8.000
DEC	5.000	7.000	17.000	8.000
FLD TURBIDITY (FTU)			DET'N LIMIT = N/A	GUIDELINE = 1.0 (A1)
JAN	.950	.250	.	.
FEB	.450	.110	.	.
MAR	.740	.170	.	.
APR	1.500	.120	.450	.690
MAY	1.100	.140	.150	.180
JUN	1.760	.	.130	.100
JUL	1.320	.210	.280	.280
AUG	1.000	.110	.200	.130
SEP	1.900	.230	.	.160
OCT	.750	.070	.110	.330
NOV	.900	.050	.	.
DEC	1.150	.060	.130	.070

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
CHEMISTRY (LAB)				
ALKALINITY (MG/L)			DET'N LIMIT = .200	GUIDELINE = 30-500 (A4)
JAN	100.200	96.400	98.000	96.700
FEB	103.900	96.900	96.500	96.500
MAR	104.200	96.400	100.900	98.300
APR	104.400	98.100	98.300	103.400
MAY	104.900	102.700	100.400	102.300
JUN	102.500	96.600	100.300	101.000
JUL	103.300	97.600	99.800	98.300
AUG	102.600	97.100	97.000	98.100
SEP	97.300	92.500	92.100	92.300
OCT	101.200	95.300	96.800	97.100
NOV	102.300	96.100	96.600	97.300
DEC	!RE	97.300	97.200	96.700
CALCIUM (MG/L)			DET'N LIMIT = .100	GUIDELINE = 100 (F2)
JAN	39.400	40.000	40.000	40.600
FEB	41.400	40.800	40.600	40.800
MAR	42.400	41.600	41.000	41.600
APR	40.600	40.400	40.600	41.000
MAY	40.200	40.000	40.600	40.400
JUN	39.000	39.800	39.000	38.400
JUL	39.000	39.800	39.800	39.800
AUG	39.800	40.400	41.100	41.100
SEP	41.400	41.400	41.000	40.000
OCT	41.600	41.600	42.400	42.800
NOV	41.800	42.400	43.000	43.400
DEC	!RE	39.000	39.000	38.800
CYANIDE (MG/L)			DET'N LIMIT = 0.001	GUIDELINE = .200 (A1)
JAN	BDL	BDL	.	BDL
FEB	BDL	BDL	.	.003 <T
MAR	BDL	BDL	.	BDL
APR	BDL	BDL	.	BDL
MAY	BDL	BDL	.	BDL
JUN	BDL	BDL	.	BDL
JUL	BDL	BDL	.	BDL
AUG	BDL	BDL	.	BDL
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	BDL	BDL	.	BDL
DEC	BDL	!RE	.	BDL

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FATE FLOW
CHLORIDE (MG/L)		DET'N LIMIT = .200		GUIDELINE = 250 (A3)
JAN	23.700	24.800	25.000	24.700
FEB	23.500	24.600	24.900	24.600
MAR	29.000	25.100	25.300	25.100
APR	24.600	26.000	26.700	26.800
MAY	24.700	25.700	25.800	25.700
JUN	24.100	25.700	25.600	25.400
JUL	24.500	25.600	26.100	26.000
AUG	22.900	24.400	24.500	25.700
SEP	23.100	24.600	24.700	24.700
OCT	22.900	24.000	24.300	24.100
NOV	23.700	25.000	25.100	25.500
DEC	IIS	25.400	24.900	24.300
COLOUR (TCU)		DET'N LIMIT = .5		GUIDELINE = 5.0 (A3)
JAN	2.000 <T	1.000 <T	1.000 <T	1.000 <T
FEB	1.000 <T	BDL	8.000	.500 <T
MAR	3.000	1.000 <T	.500 <T	1.000 <T
APR	2.500	1.000 <T	1.000 <T	1.000 <T
MAY	1.500 <T	.500 <T	1.000 <T	.500 <T
JUN	2.000 <T	1.000 <T	1.000 <T	1.000 <T
JUL	2.000 <T	1.000 <T	1.000 <T	.500 <T
AUG	2.500	.500 <T	1.000 <T	1.000 <T
SEP	2.000 <T	.500 <T	1.000 <T	1.000 <T
OCT	2.000 <T	1.000 <T	1.000 <T	1.000 <T
NOV	2.000 <T	1.000 <T	1.000 <T	1.000 <T
DEC	IBE	1.000 <T	1.000 <T	1.000 <T
CONDUCTIVITY (UMHO/CM)		DET'N LIMIT = 1		GUIDELINE = 400 (F2)
JAN	337	339	343	338
FEB	332	332	331	330
MAR	360	329	337	334
APR	335	333	336	340
MAY	342	344	341	348
JUN	338	335	346	347
JUL	325	323	335	331
AUG	328	334	333	336
SEP	327	328	331	330
OCT	326	332	333	334
NOV	332	336	336	336
DEC	IBE	339	335	332
FLUORIDE (MG/L)		DET'N LIMIT = .01		GUIDELINE = 2.400 (A1)

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT			DISTRIBUTION SYSTEM
	RAW	TREATED	SITE 2	FREE FLOW
JAN	.120	1.040	.920	.880
FEB	.120	.960	.920	.940
MAR	.160	1.140	1.120	1.060
APR	.140	1.080	.970	.990
MAY	.130	.150	.730	.520
JUN	.130	.950	.970	.990
JUL	.160	1.060	1.000	.950
AUG	.120	1.030	1.000	.990
SEP	.120	.960	1.020	.940
OCT	.140	1.060	1.080	1.020
NOV	.140	1.080	.980	1.040
DEC	IRE	1.240	1.200	1.220
HARDNESS (MG/L)		DET'N LIMIT = .500		GUIDELINE = 80-100 (A4)
JAN	133.000	134.000	134.000	136.000
FEB	138.000	137.000	136.000	137.000
MAR	141.000	138.000	138.000	138.000
APR	137.000	137.000	137.000	138.000
MAY	134.000	135.000	136.000	136.000
JUN	130.000	133.000	135.000	133.000
JUL	133.000	135.000	135.000	135.000
AUG	133.500	135.400	136.300	136.300
SEP	138.000	137.000	136.000	135.000
OCT	140.000	140.000	142.000	143.000
NOV	138.000	140.000	140.000	141.000
DEC	IRE	134.000	134.000	132.000
IONCAL (DMSNLESS)		DET'N LIMIT = N/A		GUIDELINE = N/A
JAN	.000 NAF	.000 NAF	.000 NAF	.000 NAF
FEB	.000 NAF	.000 NAF	.000 NAF	.000 NAF
MAR	.000 NAF	.000 NAF	.000 NAF	.000 NAF
APR	.000 NAF	.000 NAF	.000 NAF	.000 NAF
MAY	.000 NAF	.000 NAF	.000 NAF	.000 NAF
JUN	.000 NAF	.000 NAF	.000 NAF	.000 NAF
JUL	.000 NAF	.000 NAF	.000 NAF	.000 NAF
AUG	2.589	.845	2.362	2.322
SEP	3.989	3.948	3.604	1.928
OCT	2.258	2.821	3.072	4.413
NOV	.560	1.342	1.826	1.554
DEC	.000 NAF	5.446	4.875	5.353
LANGELIERS INDEX (DMSNLESS)		DET'N LIMIT = N/A		GUIDELINE = N/A
JAN	.431 NAF	.331 NAF	.348 NAF	.359 NAF

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			[illegible]G	FREE FLOW
FEB	.719 NAF	.453 NAF	.399 NAF	.401 NAF
MAR	.418 NAF	.229 NAF	.302 NAF	.307 NAF
APR	.512 NAF	.283 NAF	.346 NAF	.362 NAF
MAY	.490 NAF	.478 NAF	.405 NAF	.390 NAF
JUN	.477 NAF	.450 NAF	.457 NAF	.403 NAF
JUL	.451 NAF	.316 NAF	.284 NAF	.258 NAF
AUG	.407	.239	.356	.361
SEP	.331	.299	.233	.173
OCT	.460	.394	.469	.454
NOV	.417	.215	.294	.291
DEC	.	.314	.374	.320
MAGNESIUM (MG/L)		DET'N LIMIT = .050		GUIDELINE = 30 (F2)
JAN	8.300	8.300	8.300	8.500
FEB	8.500	8.500	8.500	8.500
MAR	8.500	8.300	8.600	8.400
APR	8.600	8.700	8.600	8.700
MAY	8.300	8.500	8.500	8.500
JUN	8.000	8.300	9.200	9.100
JUL	8.600	8.600	8.700	8.600
AUG	8.300	8.400	8.300	8.200
SEP	8.400	8.300	8.300	8.400
OCT	8.700	8.700	8.700	8.700
NOV	8.100	8.200	8.000	7.900
DEC	IRE	8.900	8.900	8.600
SODIUM (MG/L)		DET'N LIMIT = .200		GUIDELINE = 200 (C3)
JAN	12.400	12.600	12.400	12.600
FEB	11.800	11.600	12.000	11.800
MAR	15.000	11.800	12.800	11.800
APR	13.400	13.600	14.000	14.000
MAY	13.600	13.200	13.200	13.400
JUN	12.600	12.600	12.600	12.800
JUL	13.200	13.000	13.000	12.800
AUG	12.200	12.000	12.000	11.800
SEP	12.400	12.600	12.800	12.400
OCT	12.400	12.200	12.200	12.800
NOV	12.200	12.000	12.200	12.000
DEC	IRE	12.400	12.400	12.200
AMMONIUM TOTAL (MG/L)		DET'N LIMIT = 0.002		GUIDELINE = .05 (F2)
JAN	.008 <T	.008 <T	.012	.006 <T

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
FEB	.008 <T	.004 <T	.004 <T	.002 <T
MAR	.200	.002 <T	.012	.004 <T
APR	.010	.012	.012	.010
MAY	.024	.002 <T	.006 <T	.006 <T
JUN	.034	.010	.022	.026
JUL	.016	.012	.008 <T	.010
AUG	.056	.018	.020	.030
SEP	BDL	.002 <T	.002 <T	.002 <T
OCT	.014	.008 <T	.006 <T	.008 <T
NOV	.008 <T	.006 <T	.008 <T	.008 <T
DEC	IRE	.012	.012	.012
NITRITE (MG/L)		DET'N LIMIT = 0.001		GUIDELINE = 1.000 (A1)
JAN	.001 <T	BDL	.001 <T	BDL
FEB	.003 <T	BDL	.001 <T	.001 <T
MAR	.013	BDL	.002 <T	BDL
APR	.054	.001 <T	.002 <T	.002 <T
MAY	.009	.001 <T	.002 <T	.001 <T
JUN	.017	.001 <T	.002 <T	.002 <T
JUL	.008	.001 <T	.002 <T	.001 <T
AUG	.035	.003 <T	.004 <T	.004 <T
SEP	.014	.001 <T	.002 <T	.001 <T
OCT	.014	.003 <T	.003 <T	.003 <T
NOV	.008	.002 <T	.006	.005
DEC	IRE	.001 <T	.002 <T	.001 <T
TOTAL NITRATES (MG/L)		DET'N LIMIT = .020		GUIDELINE = 10.000 (A1)
JAN	.415	.410	.430	.410
FEB	.365	.340	.350	.350
MAR	.535	.380	.495	.380
APR	.450	.385	.445	.400
MAY	.365	.395	.355	.365
JUN	.400	.320	.335	.325
JUL	.395	.360	.390	.355
AUG	.335	.295	.300	.300
SEP	.305	.245	.260	.250
OCT	.340	.310	.315	.315
NOV	.415	.425	.420	.435
DEC	IRE	.480	.445	.400
NITROGEN TOT KJELD (MG/L)		DET'N LIMIT = .020		GUIDELINE = N/A
JAN	.400	.150	.170	.310

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT			DISTRIBUTION SYSTEM
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
FEB	.180	.160	.170	.200
MAR	.210	.190	.180	.190
APR	.300	.190	.200	.200
MAY	.250	.160	.220	.170
JUN	.600	.230	.200	.210
JUL	.290	.200	.200	.220
AUG	.270	.200	.220	.220
SEP	.240	.200	.190	.200
OCT	.190	.150	.160	.140
NOV	.180	.140	.130	.140
DEC	IIS	.150	.150	.150
PH (DMSNLESS)		DET'N LIMIT = N/A		GUIDELINE = 6.5-8.5(A4)
JAN	8.280	8.190	8.200	8.210
FEB	8.530	8.300	8.250	8.250
MAR	8.220	8.070	8.130	8.140
APR	8.330	8.130	8.190	8.180
MAY	8.310	8.310	8.240	8.220
JUN	8.320	8.310	8.310	8.260
JUL	8.290	8.170	8.130	8.110
AUG	8.240	8.090	8.200	8.200
SEP	8.170	8.160	8.100	8.050
OCT	8.280	8.240	8.300	8.280
NOV	8.230	8.050	8.120	8.110
DEC	IRE	8.180	8.240	8.190
PHOSPHORUS FIL REACT (MG/L)		DET'N LIMIT = .0005		GUIDELINE = N/A
JAN	.004	ICR	.	.
FEB	.003	.003	.	.
MAR	.009	.004	.	.
APR	.002	.001 <T	.	.
MAY	.002	BDL	.	.
JUN	.010	.001 <T	.	.
JUL	.002 <T	.002 <T	.	.
AUG	.006	.002	.	.
SEP	.000 <T	.000 <T	.	.
OCT	.004	.002	.	.
NOV	.000 <T	.001 <T	.	.
DEC	IRE	.002	.	.
PHOSPHORUS TOTAL (MG/L)		DET'N LIMIT = .002		GUIDELINE = .40 (F2)
JAN	.088	.002 <T	.	.

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
FEB	.008 <T	.006 <T	.	.
MAR	.023	.009 <T	.	.
APR	.012	BDL	.	.
MAY	.011	.005 <T	.	.
JUN	.051	.005 <T	.	.
JUL	.013	.006 <T	.	.
AUG	.013	BDL	.	.
SEP	BDL	BDL	.	.
OCT	.010	.003 <T	.	.
NOV	.005 <T	BDL	.	.
DEC	!!S	BDL	.	.
TOTAL SOLIDS (MG/L)		DET'N LIMIT = 1.		GUIDELINE = 500 (A3)
JAN	219 CRO	220 CRO	223 CRO	220 CRO
SULPHATE (MG/L)		DET'N LIMIT = .200		GUIDELINE = 500. (A3)
AUG	27.130	29.150	32.750	29.210
SEP	26.460	29.330	29.520	29.090
OCT	27.100	30.100	29.700	29.800
NOV	26.800	29.400	29.100	28.400
DEC	!!S	33.500	33.500	33.500
TURBIDITY (FTU)		DET'N LIMIT = .02		GUIDELINE = 1.00 (A1)
JAN	.430	.180	.170	.210
FEB	.240	.120	.180	.160
MAR	.500	.110	.180	.140
APR	.550	.140	.200	!LA
MAY	.960	.210	.200	.260
JUN	.970	.590	.280	.100
JUL	1.100	.340	.410	.380
AUG	.770	.260	.400	.350
SEP	.710	.230	.350	.270
OCT	.600	.220 <T	.370	.120 <T
NOV	.820	.150	.410	.280
DEC	!RE	.380	.300	.170 <T

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
METALS				
SILVER (UG/L)		DET'N LIMIT = .020		GUIDELINE = 50. (A1)
JAN	.040 <T	.050 <T	!SM	.030 <T
FEB	.060 <T	.040 <T	.030 <T	.030 <T
MAR	.040 <T	.040 <T	BDL	.020 <T
APR	.040 <T	BDL	BDL	BDL
MAY	.030 <T	.110 <T	.030 <T	.050 <T
JUN	.050 <T	BDL	BDL	BDL
JUL	.040 <T	.050 <T	.080 <T	BDL
AUG	BDL	BDL	BDL	BDL
SEP	.040 <T	.040 <T	.030 <T	BDL
OCT	BDL	BDL	BDL	BDL
NOV	BDL	.050 <T	.040 <T	.110 <T
DEC	BDL	BDL	BDL	BDL
ALUMINUM (UG/L)		DET'N LIMIT = .050		GUIDELINE = 100.(A4)
JAN	14.000	12.000	!SM	30.000
FEB	7.800	3.100	6.900	7.200
MAR	10.000	3.500	7.200	2.100
APR	15.000	100.000	100.000	12.000
MAY	12.000	140.000	110.000	110.000
JUN	16.000	210.000	110.000	190.000
JUL	11.000	200.000	220.000	180.000
AUG	7.100	110.000	110.000	100.000
SEP	14.000	200.000	160.000	170.000
OCT	8.900	110.000	100.000	110.000
NOV	8.100	64.000	54.000	85.000
DEC	9.500	76.000	53.000	76.000
ARSENIC (UG/L)		DET'N LIMIT = 0.050		GUIDELINE = 50.0 (A1)
JAN	1.100	1.300	!SM	1.200
FEB	1.100	1.200	1.400	1.300
MAR	.520 <T	.810 <T	.440 <T	BDL
APR	.480 <T	.290 <T	.430 <T	BDL
MAY	.730 <T	.810 <T	.750 <T	.730 <T
JUN	1.000 <T	1.000 <T	.610 <T	.940 <T
JUL	1.200	.660 <T	.710 <T	.760 <T
AUG	1.300	1.000 <T	1.000 <T	1.000 <T
SEP	1.200	1.100	1.100	.880 <T
OCT	1.300	1.100	.960 <T	1.200
NOV	.710 <T	.770 <T	.400 <T	.890 <T
DEC	1.100	1.400	.860 <T	1.200
BARIUM (UG/L)		DET'N LIMIT = 0.020		GUIDELINE = 1000. (A1)

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
JAN	23.000	23.000	ISM	22.000
FEB	25.000	24.000	24.000	24.000
MAR	22.000	24.000	23.000	7.000
APR	22.000	22.000	22.000	7.900
MAY	21.000	23.000	24.000	24.000
JUN	24.000	22.000	22.000	24.000
JUL	23.000	23.000	26.000	24.000
AUG	24.000	24.000	24.000	24.000
SEP	23.000	23.000	24.000	23.000
OCT	26.000	26.000	24.000	24.000
NOV	23.000	24.000	22.000	22.000
DEC	24.000	23.000	23.000	23.000
BORON (UG/L)		DET'N LIMIT = 0.200		GUIDELINE = 5000. (A1)
JAN	IAW	IAW	IAW	IAW
FEB	25.000	27.000	27.000	26.000
MAR	28.000	25.000	35.000	26.000
APR	27.000	27.000	27.000	23.000
MAY	26.000	26.000	35.000	25.000
JUN	44.000	25.000	33.000	29.000
JUL	26.000	27.000	27.000	26.000
AUG	66.000	27.000	55.000	26.000
SEP	35.000	56.000	59.000	30.000
OCT	55.000	48.000	34.000	43.000
NOV	26.000	68.000	27.000	39.000
DEC	28.000	44.000	28.000	43.000
BERYLLIUM (UG/L)		DET'N LIMIT = 0.010		GUIDELINE = .20 (N)
JAN	BDL	BDL	ISM	BDL
FEB	.010 <T	BDL	.020 <T	BDL
MAR	.040 <T	.020 <T	BDL	.060 <T
APR	BDL	BDL	BDL	BDL
MAY	BDL	BDL	.030 <T	BDL
JUN	.040 <T	BDL	BDL	BDL
JUL	.040 <T	.050 <T	.040 <T	BDL
AUG	BDL	BDL	.060 <T	BDL
SEP	BDL	BDL	BDL	BDL
OCT	.040 <T	.170 <T	BDL	.120 <T
NOV	BDL	.090 <T	BDL	.050 <T
DEC	BDL	.100 <T	.080 <T	.070 <T
CADMIUM (UG/L)		DET'N LIMIT = 0.050		GUIDELINE = 5.000 (A1)
JAN	.070 <T	.070 <T	ISM	BDL

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
FEB	.070 <T	.050 <T	BDL	BDL
MAR	.050 <T	.060 <T	.300 <T	.060 <T
APR	.130 <T	.090 <T	BDL	BDL
MAY	.060 <T	.130 <T	.160 <T	BDL
JUN	.100 <T	.080 <T	.180 <T	BDL
JUL	.070 <T	.080 <T	.100 <T	BDL
AUG	.080 <T	.060 <T	.110 <T	BDL
SEP	BDL	BDL	BDL	BDL
OCT	BDL	BDL	.180 <T	BDL
NOV	BDL	BDL	BDL	BDL
DEC	BDL	BDL	.090 <T	BDL
COBALT (UG/L)		DET'N LIMIT = 0.020		GUIDELINE = 1000 (H)
JAN	.070 <T	.110 <T	!SM	.080 <T
FEB	.040 <T	.030 <T	.040 <T	.050 <T
MAR	.020 <T	.020 <T	1.100	.020 <T
APR	.590 <T	.550 <T	.560 <T	.060 <T
MAY	.040 <T	.050 <T	.050 <T	.030 <T
JUN	.090 <T	.080 <T	1.200	.090 <T
JUL	.100 <T	.060 <T	.130 <T	.090 <T
AUG	.130 <T	.090 <T	.050 <T	.050 <T
SEP	.150 <T	.070 <T	.080 <T	.060 <T
OCT	.200 <T	.170 <T	.740 <T	.230 <T
NOV	BDL	BDL	BDL	.170 <T
DEC	.230 <T	.210 <T	.240 <T	.190 <T
CHROMIUM (UG/L)		DET'N LIMIT = 0.100		GUIDELINE = 50. (A1)
JAN	.500 <T	.450 <T	!SM	.420 <T
FEB	.580 <T	.680 <T	.600 <T	.620 <T
MAR	.650 <T	.570 <T	1.100	1.200
APR	.830 <T	.620 <T	.570 <T	1.100
MAY	1.200	.810 <T	2.200	.820 <T
JUN	3.300	.820 <T	.600 <T	.530 <T
JUL	.660 <T	.730 <T	.680 <T	.680 <T
AUG	2.800	.760 <T	2.200	.680 <T
SEP	1.600	3.700	3.900	.870 <T
OCT	6.400	5.100	.800 <T	4.100
NOV	.670 <T	7.200	.560 <T	4.500
DEC	.820 <T	3.200	.760 <T	3.500
COPPER (UG/L)		DET'N LIMIT = .100		GUIDELINE = 1000 (A3)
JAN	1.100	69.000	!SM	10.000
FEB	1.200	1.200	10.000	10.000

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
MAR	1.100	1.100	260.000	13.000
APR	1.400	1.200	22.000	9.700
MAY	1.300	1.100	130.000	6.200
JUN	1.500	1.100	180.000	5.700
JUL	1.900	1.500	31.000	4.300
AUG	1.400	1.000 <T	19.000	2.800
SEP	1.900	1.200	15.000	3.700
OCT	1.500	.950 <T	120.000	14.000
NOV	1.100	.930 <T	75.000	18.000
DEC	1.800	1.300	110.000	9.200
IRON (UG/L)		DET'N LIMIT = 4.000		GUIDELINE = 300. (A3)
JAN	21.000 <T	15.000 <T	ISM	10.000 <T
FEB	12.000 <T	7.000 <T	9.100 <T	12.000 <T
MAR	22.000 <T	5.400 <T	BDL	BDL
APR	26.000	BDL	10.000 <T	BDL
MAY	21.000 <T	8.700 <T	6.900 <T	16.000 <T
JUN	37.000 <T	19.000 <T	23.000 <T	19.000 <T
JUL	27.000 <T	12.000 <T	14.000 <T	17.000 <T
AUG	8.800 <T	BDL	7.700 <T	9.900 <T
SEP	29.000 <T	BDL	16.000 <T	17.000 <T
OCT	13.000 <T	BDL	8.200 <T	8.500 <T
NOV	17.000 <T	BDL	BDL	BDL
DEC	22.000 <T	11.000 <T	9.100 <T	7.200 <T
MERCURY (UG/L)		DET'N LIMIT = 0.010		GUIDELINE = 1.000 (A1)
JAN	.010	.010	.	.010
FEB	.010	.010	.	.010
MAR	.010	.020	.	.010
APR	.010	.010	.	.020
MAY	.040	.060	.	.010
JUN	.380	.330	.	.020 <T
JUL	.480	.470	.	.020 <T
AUG	.570	.580	.	.040 <T
SEP	BDL	BDL	.	.030 <T
OCT	.110	.120	.	BDL
NOV	.130	.120	.	BDL
DEC	.110	.100	.	BDL
MANGANESE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 50.0 (A3)
JAN	1.800	.800	ISM	.580
FEB	1.700	.430 <T	.830	.820
MAR	3.100	.510	7.100	BDL

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
APR	2.700	.500	.810	BDL
MAY	2.300	.750	1.100	.840
JUN	3.400	1.100	12.000	1.300
JUL	4.000	1.200	2.400	1.400
AUG	2.400	.510	1.100	.950
SEP	3.300	.600	1.300	1.100
OCT	2.400	.400 <T	6.400	1.300
NOV	2.800	.360 <T	.470 <T	.560
DEC	2.700	.380 <T	.970	.380 <T
MOLYBDENUM (UG/L)		DET'N LIMIT = 0.020		GUIDELINE = 500 (H)
JAN	1.200	1.200	ISM	1.200
FEB	1.300	1.200	1.300	1.300
MAR	1.400	1.200	1.200	1.400
APR	1.200	1.200	1.200	1.200
MAY	1.100	1.200	1.400	1.300
JUN	1.200	1.200	1.300	1.300
JUL	1.300	1.300	1.300	1.400
AUG	1.300	1.200	1.500	1.300
SEP	1.200	1.400	1.300	1.200
OCT	1.100	1.200	1.200	1.300
NOV	1.100	1.200	1.200	1.300
DEC	1.300	1.400	1.300	1.300
NICKEL (UG/L)		DET'N LIMIT = 0.100		GUIDELINE = 50. (F3)
JAN	1.200 <T	12.000	ISM	1.400
FEB	.550 <T	.120 <T	.380 <T	.360 <T
MAR	1.600	.990 <T	1.700	BDL
APR	1.900	1.900	2.500	BDL
MAY	1.300 <T	1.400 <T	3.500	1.400 <T
JUN	1.100 <T	1.100 <T	2.200	.790 <T
JUL	1.300 <T	.900 <T	14.000	1.200 <T
AUG	BDL	.160 <T	2.500	BDL
SEP	1.200 <T	.570 <T	3.800	.560 <T
OCT	2.400	2.600	4.400	2.200
NOV	BDL	BDL	BDL	BDL
DEC	1.600 <T	2.200	8.900	1.800 <T
LEAD (UG/L)		DET'N LIMIT = 0.050		GUIDELINE = 50. (A1)
JAN	.160 <T	1.100	ISM	.220
FEB	.100 <T	.090 <T	.220	.230
MAR	.110 <T	.040 <T	2.700	.290
APR	.230	BDL	.300	BDL

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
MAY	.160 <T	.130 <T	1.900	.280
JUN	.140 <T	.030 <T	2.500	.220
JUL	.140 <T	BDL	.780	.270
AUG	.100 <T	.040 <T	.580	.150 <T
SEP	.190 <T	.080 <T	.620	.140 <T
OCT	.060 <T	BDL	2.400	.290
NOV	.110 <T	BDL	5.000	.880
DEC	.150 <T	.190 <T	7.600	.330
ANTIMONY (UG/L)		DET'N LIMIT = .050		GUIDELINE = 146. (D4)
JAN	.270	.260	ISM	.260
FEB	.260	.260	.250	.270
MAR	.390	.230	.250	.230
APR	.250	.220	.260	.150 <T
MAY	.230	.250	.360	.220
JUN	.270	.220	.230	.230
JUL	.350	.320	.320	.290
AUG	.650	.570	.810	.790
SEP	.540	.580	.560	.520
OCT	.700	.640	.580	.660
NOV	.580	.620	.690	.750
DEC	.390	.360	.420	.700
SELENIUM (UG/L)		DET'N LIMIT = 0.200		GUIDELINE = 10. (A1)
JAN	.680 <T	1.200 <T	ISM	1.100 <T
FEB	.240 <T	.800 <T	.900 <T	.750 <T
MAR	1.200 <T	.760 <T	1.100 <T	.960 <T
APR	.840 <T	2.100 <T	1.500 <T	1.200 <T
MAY	BDL	2.400 <T	2.300 <T	2.300 <T
JUN	1.300 <T	.420 <T	2.100 <T	1.100 <T
JUL	1.800 <T	2.000 <T	2.300 <T	2.600 <T
AUG	.210 <T	.270 <T	BDL	.410 <T
SEP	.800 <T	1.200 <T	2.200 <T	2.600 <T
OCT	1.400 <T	3.500 <T	2.900 <T	5.000 <T
NOV	.710 <T	1.600 <T	1.400 <T	3.200 <T
DEC	.620 <T	.980 <T	2.500 <T	1.900 <T
STRONTIUM (UG/L)		DET'N LIMIT = .050		GUIDELINE = 2000.(H)
JAN	190.000	190.000	ISM	190.000
FEB	210.000	200.000	210.000	210.000
MAR	210.000	200.000	180.000	87.000
APR	200.000	200.000	200.000	100.000
MAY	180.000	200.000	200.000	200.000

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
JUN	190.000	200.000	190.000	190.000
JUL	200.000	200.000	200.000	200.000
AUG	200.000	190.000	200.000	210.000
SEP	210.000	200.000	210.000	210.000
OCT	210.000	200.000	190.000	190.000
NOV	170.000	170.000	170.000	180.000
DEC	180.000	180.000	180.000	170.000
TITANIUM (UG/L)		DET'N LIMIT = .050		GUIDELINE = N/A
JAN	2.900	3.200	ISM	3.200
FEB	6.200	6.500	7.900	7.900
MAR	7.500	7.000	8.700	1.500
APR	5.900	6.400	6.700	3.200
MAY	2.200	1.200 <T	1.900 <T	2.600
JUN	3.600	3.000	3.700	3.900
JUL	3.400	3.400	4.300	4.100
AUG	10.000	10.000	11.000	10.000
SEP	6.200	5.400	6.300	6.300
OCT	3.300	3.300	3.300	3.000
NOV	1.800 <T	1.600 <T	1.400 <T	1.400 <T
DEC	3.300	3.900	4.000	3.500
THALLIUM (UG/L)		DET'N LIMIT = .010		GUIDELINE = 13. (D4)
JAN	.020 <T	.010 <T	ISM	.010 <T
FEB	.030 <T	.020 <T	.020 <T	.020 <T
MAR	.020 <T	BDL	.010 <T	.010 <T
APR	BDL	BDL	BDL	BDL
MAY	BDL	BDL	BDL	BDL
JUN	BDL	BDL	BDL	BDL
JUL	BDL	BDL	BDL	BDL
AUG	BDL	BDL	BDL	BDL
SEP	BDL	BDL	BDL	BDL
OCT	BDL	BDL	BDL	BDL
NOV	.020 <T	BDL	BDL	.020 <T
DEC	BDL	BDL	BDL	BDL
URANIUM (UG/L)		DET'N LIMIT = .020		GUIDELINE = 20. (A2)
JAN	IAV	.400	.400	.400
FEB	.330	.410	.360	.420
MAR	.320	.360	.240	.320
APR	.350	.390	.430	.210
MAY	.310	.480	.390	.400
JUN	.370	.410	.250	.420

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
JUL	.330	.320	.400	.350
AUG	.370	.420	.390	.390
SEP	.300	.340	.290	.330
OCT	.360	.410	.300	.420
NOV	.300	.330	.270	.400
DEC	.340	.370	.290	.360
VANADIUM (UG/L)		DET'N LIMIT = .050		GUIDELINE = 100 (W)
JAN	.310 <T	.290 <T	ISM	.260 <T
FEB	.200 <T	.210 <T	.210 <T	.210 <T
MAR	.280 <T	.190 <T	.240 <T	.190 <T
APR	.400	.510	.520	.380 <T
MAY	.300 <T	.330 <T	.350 <T	.330 <T
JUN	.260 <T	.310 <T	.200 <T	.320 <T
JUL	.330 <T	.370 <T	.500 <T	.370 <T
AUG	.270 <T	.420 <T	.420 <T	.370 <T
SEP	.290 <T	.530	.470 <T	.510
OCT	.370 <T	.640	.470 <T	.600
NOV	.200 <T	.340 <T	.320 <T	.320 <T
DEC	.300 <T	.410 <T	.440 <T	.510
ZINC (UG/L)		DET'N LIMIT = .001		GUIDELINE = 5000. (A3)
JAN	1.300	6.900	ISM	1.800
FEB	1.000	.710 <T	1.800	1.900
MAR	2.700	1.500	160.000	1.600
APR	1.800	1.400	17.000	.870 <T
MAY	1.500	1.200	93.000	2.400
JUN	1.500	.750 <T	150.000	3.600
JUL	2.600	2.200	83.000	4.800
AUG	1.900	1.500	60.000	2.000
SEP	2.700	1.500	41.000	2.400
OCT	1.900	1.200	97.000	3.800
NOV	1.300	.860 <T	15.000	3.300
DEC	2.000	1.800	13.000	2.300

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT			DISTRIBUTION SYSTEM
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
PESTICIDES & PCB				
ALPHA BHC (NG/L)		DET'N LIMIT = 1.000		GUIDELINE = 700 (G)
JAN	2.000 <T	2.000 <T	.	2.000 <T
FEB	2.000 <T	2.000 <T	.	2.000 <T
MAR	BDL	BDL	.	BDL
APR	3.000 <T	3.000 <T	.	2.000 <T
MAY	BDL	2.000 <T	.	2.000 <T
JUN	BDL	BDL	.	BDL
JUL	3.000 <T	3.000 <T	.	4.000 <T
AUG	3.000 <T	3.000 <T	.	2.000 <T
SEP	2.000 <T	2.000 <T	.	2.000 <T
OCT	2.000 <T	BDL	.	2.000 <T
NOV	3.000 <T	3.000 <T	.	3.000 <T
DEC	2.000 <T	3.000 <T	.	1.000 <T
LINDANE (NG/L)		DET'N LIMIT = 1.000		GUIDELINE = 4000 (A1)
JAN	BDL	BDL	.	BDL
FEB	BDL	BDL	.	BDL
MAR	2.000 <T	BDL	.	BDL
APR	BDL	BDL	.	BDL
MAY	BDL	BDL	.	BDL
JUN	BDL	BDL	.	BDL
JUL	2.000 <T	2.000 <T	.	2.000 <T
AUG	2.000 <T	2.000 <T	.	BDL
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	1.000 <T	2.000 <T	.	2.000 <T
DEC	BDL	1.000 <T	.	BDL
ATRAZINE (NG/L)		DET'N LIMIT = 50.00		GUIDELINE = 60000 (B3)
JAN	BDL	BDL	.	BDL
FEB	BDL	BDL	.	BDL
MAR	BDL	BDL	.	BDL
APR	BDL	BDL	.	120.000 <T
MAY	BDL	BDL	.	BDL
JUN	BDL	BDL	.	BDL
JUL	BDL	BDL	.	BDL
AUG	BDL	BDL	.	BDL
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	BDL	BDL	.	BDL
DEC	BDL	BDL	.	BDL

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			VG	FREE FLOW
PHENOLICS (UG/L)	PHENOLICS	DET'N LIMIT = 0.2		GUIDELINE = 2.00 (A3)
JAN	BDL	BDL	.	.
FEB	1.000 <T	BDL	.	.
MAR	BDL	BDL	.	.
APR	BDL	BDL	.	.
MAY	1.400 UCR	3.000 UCR	.	.
JUN	1.600	.800 <T	.	.
JUL	.600 <T	.400 <T	.	.
AUG	1.000	.800	.	.
SEP	BDL	BDL	.	.
OCT	.400 <T	1.200	.	.
NOV	.800 <T	.800 <T	.	.
DEC	.600 <T	.600 <T	.	.

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
VOLATILES				
TOLUENE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 24.0 (84)
APR	BDL	BDL	.	BDL
MAY	BDL	.100 <T	.	.050 <T
JUN	BDL	.050 <T	.	.050 <T
JUL	BDL	BDL	.	.100 <T
AUG	BDL	BDL	.	BDL
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	BDL	.050 <T	.	BDL
DEC	BDL	.100 <T	.	.100 <T
ETHYLBENZENE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 2.4 (84)
APR	BDL	.050 <T	.	.050 <T
MAY	BDL	BDL	.	.050 <T
JUN	BDL	.100 <T	.	.050 <T
JUL	BDL	.050 <T	.	.200 <T
AUG	BDL	.100 <T	.	.100 <T
SEP	BDL	.050 <T	.	BDL
OCT	BDL	.100 <T	.	.100 <T
NOV	BDL	.100 <T	.	BDL
DEC	BDL	BDL	.	.050 <T
M-XYLENE (UG/L)		DET'N LIMIT = .100		GUIDELINE = 300 (84)
APR	BDL	BDL	.	BDL
MAY	BDL	BDL	.	BDL
JUN	BDL	BDL	.	BDL
JUL	BDL	BDL	.	BDL
AUG	BDL	BDL	.	BDL
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	BDL	.100 <T	.	BDL
DEC	BDL	BDL	.	BDL
O-XYLENE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 300 (84)
APR	BDL	BDL	.	BDL
MAY	BDL	BDL	.	.050 <T
JUN	BDL	BDL	.	BDL
JUL	BDL	BDL	.	BDL
AUG	BDL	BDL	.	BDL
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT			DISTRIBUTION SYSTEM
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
NOV	BDL	.050 <T	.	BDL
DEC	BDL	BDL	.	.050 <T
STYRENE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 46.5 (D2)
OCT	BDL	.100 <T	.	.300 <T
NOV	.250 <T	.100 <T	.	.150 <T
DEC	BDL	.100 <T	.	.100 <T
CHLOROFORM (UG/L)		DET'N LIMIT = .100		GUIDELINE = 350 (A1+)
APR	BDL	13.100	.	20.600
MAY	BDL	14.000	.	18.200
JUN	BDL	19.200	.	14.900
JUL	BDL	13.400	.	12.800
AUG	.200 <T	19.500	.	12.700
SEP	.200 <T	21.300	.	15.800
OCT	BDL	22.400	.	13.900
NOV	.400 <T	14.200	.	14.300
DEC	BDL	11.800	.	12.000
111, TRICHLOROETHANE (UG/L)		DET'N LIMIT = .020		GUIDELINE = 200 (D1)
APR	BDL	BDL	.	BDL
MAY	BDL	BDL	.	BDL
JUN	.200 <T	.200 <T	.	.080 <T
JUL	BDL	BDL	.	BDL
AUG	BDL	BDL	.	BDL
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	BDL	BDL	.	BDL
DEC	BDL	BDL	.	.400 <T
DICHLOROBROMOMETHANE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 350 (A1+)
APR	BDL	10.950	.	13.350
MAY	BDL	11.200	.	8.400
JUN	BDL	13.550	.	11.000
JUL	BDL	10.600	.	10.300
AUG	.100 <T	15.000	.	12.300
SEP	.200 <T	14.600	.	12.300
OCT	BDL	15.450	.	11.500
NOV	BDL	12.550	.	11.050
DEC	BDL	11.700	.	11.250

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
CHLORODIBROMOMETHANE (UG/L)		DET'N LIMIT = .100		GUIDELINE = 350 (A1+)
APR	BDL	7.300	.	8.000
MAY	BDL	7.700	.	3.200
JUN	BDL	8.700	.	6.800
JUL	BDL	5.900	.	7.500
AUG	BDL	7.700	.	10.400
SEP	.200 <T	9.100	.	8.700
OCT	BDL	7.800	.	8.200
NOV	BDL	7.300	.	6.000
DEC	BDL	8.000	.	8.800
T-CHLOROETHYLENE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 10.0 (C2)
APR	BDL	BDL	.	BDL
MAY	BDL	BDL	.	BDL
JUN	BDL	BDL	.	BDL
JUL	BDL	BDL	.	BDL
AUG	BDL	BDL	.	BDL
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	BDL	.100 <T	.	BDL
DEC	BDL	BDL	.	.050 <T
BROMOFORM (UG/L)		DET'N LIMIT = .200		GUIDELINE = 350 (A1+)
APR	BDL	.800 <T	.	.800 <T
MAY	BDL	1.000 <T	.	.400 <T
JUN	BDL	.400 <T	.	.400 <T
JUL	BDL	.200 <T	.	.400 <T
AUG	BDL	.600 <T	.	.600 <T
SEP	BDL	1.000 <T	.	.800 <T
OCT	BDL	.600 <T	.	.800 <T
NOV	BDL	.800 <T	.	.800 <T
DEC	BDL	1.000 <T	.	1.200 <T
TOTL TRIHALOMETHANES (UG/L)		DET'N LIMIT = .500		GUIDELINE = 350 (A1)
APR	BDL	32.150	.	42.750
MAY	BDL	33.900	.	30.200
JUN	BDL	41.850	.	33.100
JUL	BDL	30.100	.	31.000
AUG	BDL	42.800	.	36.000
SEP	.600 <T	46.000	.	37.600
OCT	BDL	46.250	.	34.400
NOV	BDL	34.850	.	32.150

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM BURLINGTON WSS 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 2	
			STANDING	FREE FLOW
DEC	BDL	32.500	.	33.250

Table VI

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
BACTERIOLOGICAL			
STANDARD PLATE COUNT MEMBRANE FILTRATION	CT/ML	0	500/ML(A1)
P/A BOTTLE		0	0 (A1*)
TOTAL COLIFORM MEMBRANE FILTRATION	CT/100ML	0	5/100mL(A1)
TOTAL COLIFORM BACKGROUND MF	CT/100ML	0	N/A
CHLOROAROMATICS			
HEXACHLOROBUTADIENE	NG/L	1.000	450. (D4)
1,2,3-TRICHLOROBENZENE	NG/L	5.000	10000 (I)
1,2,3,4-TETRACHLOROBENZENE	NG/L	1.000	10000 (I)
1,2,3,5-TETRACHLOROBENZENE	NG/L	1.000	10000 (I)
1,2,4-TRICHLOROBENZENE	NG/L	5.000	10000 (I)
1,2,4,5-TETRACHLOROBENZENE	NG/L	1.000	38000 (D4)
1,3,5-TRICHLOROBENZENE	NG/L	5.000	10000 (D4)
HEXACHLOROBENZENE	NG/L	1.0	10. (C1)
HEXACHLOROETHANE	NG/L	1.000	1900. (D4)
OCTACHLOROSTYRENE	NG/L	1.000	N/A
PENTACHLOROBENZENE	NG/L	1.000	74000 (D4)
2,3,6-TRICHLOROTOLUENE	NG/L	5.000	N/A
2,4,5-TRICHLOROTOLUENE	NG/L	5.000	N/A
2,6,A-TRICHLOROTOLUENE	NG/L	5.000	N/A
CHLOROPHENOLS			
2,3,4-TRICHLOROPHENOL	NG/L	50.	N/A
2,3,4,5-TETRACHLOROPHENOL	NG/L	50.	N/A
2,3,5,6-TETRACHLOROPHENOL	NG/L	50.	N/A
2,4,5-TRICHLOROPHENOL	NG/L	50.	2600000 (D4)
2,4,6-TRICHLOROPHENOL	NG/L	50.	5000. (B1)
PENTACHLOROPHENOL	NG/L	50.	60000. (B1)
CHEMISTRY (FLD)			
FIELD COMBINED CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD FREE CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD TOTAL CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD PH	DMSNLESS	N/A	6.5-8.5(A4)
FIELD TEMPERATURE	°C	N/A	<15 °C(A1)
FIELD TURBIDITY	FTU	N/A	1.0 (A1)
CHEMISTRY (LAB)			
ALKALINITY	MG/L	.200	30-500(A4)
CALCIUM	MG/L	.100	100. (F2)
CYANIDE	MG/L	.001	.20(A1)
CHLORIDE	MG/L	.200	250. (A3)
COLOUR	TCU	.5	5.0 (A3)
CONDUCTIVITY	UMHO/CM	1.	400. (F2)
FLUORIDE	MG/L	.01	2.4 (A1)
HARDNESS	MG/L	.50	80-100(A4)
MAGNESIUM	MG/L	.05	30. (F2)
SODIUM	MG/L	.20	200. (C3)
AMMONIUM TOTAL	MG/L	.002	.05(F2)
NITRITE	MG/L	.001	1.0 (A1)
TOTAL NITRATES	MG/L	.02	10. (A1)
NITROGEN TOTAL KJELDAHL	MG/L	.02	N/A
PH	DMSNLESS	N/A	6.5-8.5(A4)
PHOSPHORUS FIL REACT	MG/L	.0005	N/A
PHOSPHORUS TOTAL	MG/L	.002	.40(F2)
TOTAL SOLIDS	MG/L	1.	500. (A3)
TURBIDITY	FTU	.02	1.0 (A1)
METALS			

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
BERYLLIUM	UG/L	.010	0.20 (H)
CADMIUM	UG/L	.050	5.0 (A1)
COBALT	UG/L	.020	1000. (H)
CHROMIUM	UG/L	.100	50. (A1)
COPPER	UG/L	.100	1000. (A3)
IRON	UG/L	4.0	300. (A3)
MERCURY	UG/L	.01	1.0 (A1)
MANGANESE	UG/L	.050	50. (A3)
MOLYBDENUM	UG/L	.020	500. (H)
NICKEL	UG/L	.100	50. (F3)
LEAD	UG/L	.050	50. (A1)
SELENIUM	UG/L	.200	10. (A1)
SILVER	UG/L	.020	50. (A1)
STRONTIUM	UG/L	.050	2000. (H)
THALLIUM	UG/L	.010	13. (D4)
TITANIUM	UG/L	.050	N/A
URANIUM	UG/L	.020	20. (A2)
VANADIUM	UG/L	.050	100. (H)
ZINC	UG/L	.020	500. (A3)
PHENOLICS			
PHENOLICS (UNFILTERED REACTIVE)	UG/L	.2	2.0 (A3)
PESTICIDES & PCB			
ALDRIN	NG/L	1.0	700. (A1)
AMETRINE	NG/L	50.	300000. (D3)
ATRAZINE	NG/L	50.	60000. (B3)
ALPHA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	700. (G)
BETA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	300. (G)
GAMMA HEXACHLOROCYCLOHEXANE(LINDANE)	NG/L	1.0	4000. (A1)
ALPHA CHLORDANE	NG/L	2.0	7000. (A1)
GAMMA CHLORDANE	NG/L	2.0	7000. (A1)
BLADEX	NG/L	100.	10000. (B3)
DIELDRIN	NG/L	2.0	700. (A1)
METHOXYCHLOR	NG/L	5.0	100000. (A1)
ENDOSULFAN 1 (THIODAN I)	NG/L	2.0	74000. (D4)
ENDOSULFAN 2 (THIODAN II)	NG/L	4.0	74000. (D4)
ENDRIN	NG/L	4.0	200. (A1)
ENDOSULFAN SULPHATE(THIODAN SULPHATE)	NG/L	4.0	N/A
HEPTACHLOR EPOXIDE	NG/L	1.0	3000. (A1)
HEPTACHLOR	NG/L	1.0	3000. (A1)
METOLACHLOR	NG/L	500.	50000. (B3)
MIREX	NG/L	5.0	N/A
OXYCHLORDANE	NG/L	2.0	N/A
O,P-DDT	NG/L	5.0	30000. (A1)
PCB	NG/L	20.0	3000. (A2)
O,P-DDD	NG/L	5.0	N/A
PPDDE	NG/L	1.0	30000. (A1)
PPDDT	NG/L	5.0	30000. (A1)
ATRATONE	NG/L	50.	N/A
ALACHLOR	NG/L	500.	35000. (D2)
PROMETONE	NG/L	50.	52500. (D3)
PROPAZINE	NG/L	50.	16000. (D2)
PROMETRYNE	NG/L	50.	1000. (B3)
SENCOR (METRIBUZIN)	NG/L	100.	80000. (B2)
SIMAZINE	NG/L	50.	10000. (B3)
POLYAROMATIC HYDROCARBONS			
PHENANTHRENE	NG/L	10.0	N/A
ANTHRACENE	NG/L	1.0	N/A
FLUORANTHENE	NG/L	20.0	42000. (D4)
PYRENE	NG/L	20.0	N/A
BENZO(A)ANTHRACENE	NG/L	20.0	N/A
CHRYSENE	NG/L	50.0	N/A
DIMETHYL BENZO(A)ANTHRACENE	NG/L	5.0	N/A
BENZO(E)PYRENE	NG/L	50.0	N/A
BENZO(B)FLUORANTHENE	NG/L	10.0	N/A
PERYLENE	NG/L	10.0	N/A

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
DIBENZO(A,H)ANTHRACENE	NG/L	10.0	N/A
INDENO(1,2,3-C,D)PYRENE	NG/L	20.0	N/A
BENZO(B)CHRYSENE	NG/L	2.0	N/A
CORONENE	NG/L	10.0	N/A
SPECIFIC PESTICIDES			
TOXAPHENE	NG/L	N/A	5000. (A1)
2,4,5-TRICHLOROBUTYRIC ACID (2,4,5-T)	NG/L	50.	280000. (B1)
2,4-DICHLOROBUTYRIC ACID (2,4-D)	NG/L	100.	100000. (A1)
2,4-DICHLORORPHENOXYBUTYRIC ACID	NG/L	200.	18000. (B3)
2,4-D PROPIONIC ACID	NG/L	100.	N/A
DICAMBA	NG/L	100.	87000. (B3)
PICHLORAM	NG/L	100.	2450000. (D3)
SILVEX (2,4,5-TP)	NG/L	50.	10000. (A1)
DIAZINON	NG/L	20.	14000. (A1)
DICHLOROVOS	NG/L	20.	N/A
DURSBAN	NG/L	20.	N/A
ETHION	NG/L	20.	35000. (G)
GUTHION	NG/L	N/A	N/A
MALATHION	NG/L	20.	160000. (G)
MEVINPHOS	NG/L	20.	N/A
METHYL PARATHION	NG/L	50.	7000. (B3)
METHYLTRITHION	NG/L	20.	N/A
PARATHION	NG/L	20.	35000. (B1)
PHORATE (THIMET)	NG/L	20.	35. (D2)
RELDAN	NG/L	20.	N/A
RONNEL	NG/L	20.	N/A
AMINOCARB	NG/L	N/A	N/A
BENONYL	NG/L	N/A	N/A
BUX (METALKAMATE)	NG/L	2000.	N/A
CARBOFURAN	NG/L	2000.	18000. (D3)
CICP (CHLORPROPHAM)	NG/L	2000.	350000. (G)
DIALLATE	NG/L	2000.	30000. (H)
EPTAM	NG/L	2000.	N/A
IPC	NG/L	2000.	N/A
PROPOXUR (BAYGON)	NG/L	2000.	90000. (G)
SEVIN (CARBARYL)	NG/L	200.	70000. (A1)
SUTAN (BUTYLATE)	NG/L	2000.	245000. (D3)
VOLATILES			
BENZENE	UG/L	.050	5.0 (B1)
TOLUENE	UG/L	.050	24.0 (B4)
ETHYLBENZENE	UG/L	.050	2.4 (B4)
PARA-XYLENE	UG/L	.100	300. (B4)
META-XYLENE	UG/L	.100	300. (B4)
ORTHO-XYLENE	UG/L	.050	300. (B4)
1,1-DICHLOROETHYLENE	UG/L	.100	7.0 (D1)
ETHLYENE DIBROMIDE	UG/L	.05	50. (G)
METHYLENE CHLORIDE	UG/L	.500	1750. (D3)
TRANS-1,2-DICHLOROETHYLENE	UG/L	.100	350. (D3)
1,1-DICHLOROETHANE	UG/L	.100	N/A
CHLOROFORM	UG/L	.100	350. (A1+)
1,1,1-TRICHLOROETHANE	UG/L	.020	200. (D1)
1,2-DICHLOROETHANE	UG/L	.050	5.0 (D1)
CARBON TETRACHLORIDE	UG/L	.200	5.0 (D1)
1,2-DICHLOROPROPANE	UG/L	.050	10.0 (G)
TRICHLOROETHYLENE	UG/L	.100	5.0 (D1)
DICHLOROBROMOMETHANE	UG/L	.050	350. (A1+)
1,1,2-TRICHLOROETHANE	UG/L	.050	.60(D4)
CHLORODIBROMOMETHANE	UG/L	.100	350. (A1+)
TETRACHLOROETHYLENE	UG/L	.050	10.0 (C2)
BROMOFORM	UG/L	.200	350. (A1+)
1,1,2,2-TETRACHLOROETHANE	UG/L	.050	0.17(D4)
CHLOROBENZENE	UG/L	.100	1510. (D3)
1,4-DICHLOROBENZENE	UG/L	.100	5.0 (B1)
1,3-DICHLOROBENZENE	UG/L	.100	130. (G)
1,2-DICHLOROBENZENE	UG/L	.050	200. (B1)
TRIFLUOROCHLOROTOLUENE	UG/L	.100	N/A